THE
RAILWAY GAZETTE
A Journal of Management, Engineering and Operation
INCORPORATING
The Railway Engineer · TRANSPORT · The Railway News
The Railway Times · Herapath's Railway Journal · RAILWAY RECORD.
RAILWAYS ILLUSTRATED · ESTABLISHED 1835 · The Railway Official Gazette

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Annual subscription £3 10s. 0d. post free. Single copies, One shilling & Sixpence
Registered at the G.P.O. as a newspaper. Entered as second-class matter in U.S.A.

Vol. 95] FRIDAY, AUGUST 10, 1951 [No. 6

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Settlement of Industrial Disputes

THE new measure for settlement of industrial disputes, Statutory Order No. 1376, announced by the Minister of Labour, Mr. Alfred Robens, of which some account is given elsewhere in this issue, at least shows some sense of realism. It supersedes Order 1305, which was promulgated at a critical period of the war and has long since proved impracticable in peacetime. The new Order, though made under the Defence Regulations, contains no provision prohibiting strikes and lockouts, as such a provision was found to be impossible to enforce in the case of Order 1305. It gives the Minister power to suspend sittings of the new Industrial Disputes Tribunal, which it establishes, in the event of strike or lockout action designed to bring pressure to bear on that body. Where Order 1376 may not achieve its object is in the possible refusal of one or other party to a dispute to recognise the findings of the Tribunal; a situation of this kind arose early this year when the National Union of Railwaymen and the Associated Society of Locomotive Engineers & Firemen rejected the recommendations of the Court of Inquiry on railway wages. The new Order attempts to provide for this by securing the assent of both sides in advance to the composition of the Tribunal. Limitation of the use of the machinery of conciliation, on the employees' side, to trades unions which represent the majority of the workers concerned may cause difficulty in the case of a large minority with a grievance, but is unlikely to affect the railway industry to any serious extent. The decision to exclude from the scope of the Order particular disputes not concerned with wages and conditions, such as on the reinstatement of an employee, is based on experience "that such matters are not susceptible to settlement by compulsory arbitration." The proviso that when a dispute is reported to the Minister, the first possibility to be considered is use of the existing machinery of arbitration, is less a counsel of the obvious than may appear at first sight. Whatever the virtues of the new Order, however, it can achieve its object only so long as both parties concerned exercise forbearance.

International Railway Congress Association

AT the plenary session of the International Railway Congress in Rome last year it was stated that the enlarged Permanent Commission of the I.R.C.A. would hold its next meeting in Stockholm during the first fortnight of June, 1952. It will consist of several technical meetings at which three questions will be discussed: safety at level crossings; door-to-door transport; and economic aspects of closing lines and constructing new lines. The Permanent Commission, which meets periodically to bridge the three-year intervals between the full International Railway Congresses, held its last meeting at the Railway Executive headquarters in London on March 5 this year when nine nominations were made to the membership of the Permanent Commission. It was then announced that, as when the last Enlarged Meeting was held in Lisbon, members would be allowed to take with them to Stockholm one or two higher-grade officers of their department. The Association includes 35 governments, eight organisations, and 105 railways totalling some 280,000 miles.

International Electrotechnical Commission

AMONG the subjects to be discussed at a meeting of the Technical Committee on Electric Traction Equipment of the International Electrotechnical Commission to be held at the British Standards Institution in London on September 24-26 will be the preparation of specifications for the electrical equipment of rail traction vehicles. The delegates attending the meeting will include representatives from British and overseas railways and also representatives from electric traction equipment manufacturers. The work of the I.E.C. committee will cover the preparation of specifications for electrical equipment for rail traction vehicles, rules relating to mercury arc rectifiers, electric traction motors, international rating, limits of temperature rise, and so on. It is not intended that the I.E.C. rules should take the place of international rules; obviously it is of considerable advantage to have international agreement on as many points of design and specifications of equipment as possible. Furthermore the I.E.C. meetings provide an opportunity for hearing the views of traction engineers from other countries and are of assistance in formulating international rules.

British Transport Commission Statistics

THE most recent analysis of British Railways passenger traffic is that for April last, given in the British Transport Commission statistics for Period 6 of 1951. No true comparison with last year is possible because of the varying incidence of Easter. The percentages of passenger journeys in the various fare categories have not varied over a considerable period, except that of cheap day and excursions, which has tended to rise as new facilities have been introduced by the several Regions. First class travel remains at some 2·6 per cent. of total passenger journeys, a proportion which varies little, though it tends to decrease during peak holiday travel periods with their large amount of third class bookings; receipts from first class bookings in April were £968,000, a rather higher figure than in recent

months, and some 13 per cent. of total passenger receipts, which shows the importance for revenue purposes of this class of travel. For Period 6, British Railways operating "efficiency" statistics differ little from last year.

Overseas Railway Traffics

AS a result of a further advance in working expenses, Canadian Pacific Railway net earnings fell by £502,000 to £644,000 during June. There was a £1,372,000 rise in gross earnings, which amounted to £12,146,000, but it was insufficient to offset the £1,874,000 increase to £11,502,000 in working expenses. Aggregate net earnings of the C.P.R. for the current 26 weeks are £3,893,000, as compared with £3,049,000 for the equivalent period of 1950. During the first weeks of the financial year 1951-52 Paraguay Central traffics continued to make substantial advances over those for the previous year and during the fortnight ended July 27 improved by G 329,962 to G 697,380; receipts for the current four weeks are up by G 440,618 at G 1,211,710. Victorian Railways traffics for March fell from £1,974,774, last year, to £1,811,748. There were decreases in traffic returns of the railways, road motors and electric street railways, the largest of which was a £161,569 drop to £1,802,680 in railway receipts. A further improvement in Midland Railway of Western Australia traffics for May brought the total advance for 48 weeks to £108,823, at £454,081.

Imports and Consumption of Wooden Sleepers

FROM 1930-1939 the yearly imports of wooden sleepers into the United Kingdom averaged 100,000 standards of 165 cu. ft. each. This was reduced to about 34,000 standards during the war owing to the cessation of supplies from certain directions and more urgent demands on shipping space. Sources of supply in 1950 showed a change since prewar. Mr. L. G. Jennings, Statistician & Librarian to the Timber Development Association, writing in the *T. D. A. Quarterly Review*, shows that in 1938 the largest individual supplier was Poland with 40,449 standards, followed by Russia, Latvia, and Lithuania with a total of 30,158, and then Canada with 29,282. France led in 1950, with 23,401, and Canada came second with 12,176. Italy supplied 4,839 standards in 1950 and other foreign countries accounted for 14,602. A graph accompanying the above article shows that during the period for which statistics on the consumption of wooden sleepers are available (1923-1949) the number used averaged more than 3,650,000 a year although during the war the average dropped to 2,825,270. From the low total of 2,890,645 in 1947 the consumption rose to more than 4,000,000 in 1948 and 1949 due to the making up of arrears in maintenance of track.

Diesel Push-and-Pull

AN unusual form of operation is current in the Frankfort and other areas of the German Federal Railway which had its origin in an intense short-distance traffic growing up soon after the war when railcar stock was extremely small. This traffic was between Höchst, Frankfort, and Offenbach, about 12 miles. Trains ran into Frankfort terminal station and reversed there; because of this, either-end drive was needed so as to reduce the number of motive-power units and the number of terminal movements and length of the stop. Railcars not being available it was decided to use some of the six-wheel diesel-hydraulic locomotives of about 360 h.p. built between 1937 and 1944. A diesel push-and-pull unit was the principle involved; but to obviate the expense of fitting remote control and having fixed train sets, certain coaches were altered to include a compartment for the assistant driver. When this coach is leading, the assistant operates the brakes only. On sighting signals at "stop" or "caution" he applies the brakes and gives audible warning to the driver in the locomotive at the rear. Thus, trains of varying formation—in practice from two to six coaches—and of any stock at hand, can be worked at the cost of minor modifications to only a few vehicles, and the traffic worked over routes of considerable curvature with adequate safety and expedition.

An Experimental Train in Northern Ireland

SOME eighteen months ago, with the object of experimenting on the Belfast-Bangor line with a three-coach diesel train, the Ulster Transport Authority decided to convert several railway carriages to railcars. This has now been carried out, and for the purpose two centre corridor coaches were used, the underframes of which were extended to accommodate four diesel engines similar to those used for buses. A standard compartment carriage with side doors was chosen as the intermediate coach so as to provide the maximum number of seats for rush-hour traffic. The four engines driving the train, which is described elsewhere in this issue, develop a total output of 500 h.p. and permit a maximum speed of 75 m.p.h. There are seats for 16 first class and 250 standard class passengers and a generous allowance has been made for luggage space. First class passengers are accommodated immediately behind the driving compartments of the power cars. The immediate economy hoped for as a result of this experiment is a considerable saving in fuel cost. The conversion was carried out in the Duncrue Street workshops, and Mr. J. Courtney, Chief Engineer of the U.T.A., and his staff, are now designing a 1,000-h.p. six-coach diesel train.

Electrification from Paris to Dijon

WITH the inauguration last summer of electric working between Paris and Laroche, all trains on the former P.L.M. main line out of the Gare de Lyon, Paris, are now electrically hauled as far as Dijon. Work is well advanced on the final stage, from Dijon southwards, of the great Paris-Lyons electrification project of the S.N.C.F. The work involved in the Paris-Laroche section is described elsewhere in this issue; it has necessitated extensive resignalling, and important civil engineering works outside the Gare de Lyon. The abolition of the time-honoured stop at Laroche for engine changing—in steam days a powerful locomotive was needed to haul the heaviest trains over Blaisy Bas summit north of Dijon—has resulted in considerable accelerations. Electric working of the south-eastern suburban services from the Gare de Lyon and the Gare d'Orsay (*via* Juvisy and Corbeil) is being performed now by locomotive-hauled trains, pending the delivery of multiple-unit stock. Paris now possesses three main line termini which, virtually, are served entirely by electric trains—Montparnasse, Austerlitz, and Lyon.

British Engineering Products

THE engineering industry made a valuable contribution last year towards increasing the level of industrial output to 40 per cent. above the volume for 1946. Manufacturers of machinery and equipment, morever, set an example by turning out 70 per cent. more goods last year than in 1946, while engineering exports in 1950 at £808 million reached the highest level ever recorded by the industry. Every two years since 1906, with the exception of the periods covered by two wars, an opportunity has been given to inspect the latest results of British engineering achievement and enterprise at the largest exhibition of its kind in the world. This interval ensures the appearance of much new equipment in various branches of engineering and it provides ample opportunity for firms to develop new processes. This year the Engineering, Marine & Welding Exhibition will be held at Olympia, London, from August 30 to September 13, and during this period 70 trade and technical associations—including the Institution of Locomotive Engineers—will pay official visits. On this occasion it has been decided to incorporate the Foundry Trades Exhibition and a separate section has been earmarked for the display of foundry equipment.

Derailment at an Occupation Crossing

AS will be seen from the summary in this issue of Colonel D. McMullen's report, the accident at the Court Sart Farm occupation crossing, near Neath, on October 9, 1950, which fortunately was much less serious than it might easily have been, was another example of the dangers to rail traffic at such places arising from the development of heavy road vehicles. The lorry driver misjudged the width of the far side gateway and thus was obliged to stop foul of the line. There was a telephone but neither he nor his mate knew of it, nor did the tenant of the farm served by the crossing, who had been there for about six months. The character of the vehicle was such that it came under an Order issued in 1941, the provisions of which, Colonel McMullen thinks, should be made to cover these crossings, resulting in the movements of such large lorries being notified in advance. This crossing problem is very complex, but of its growing seriousness there can be no doubt.

Conscription of Railwaymen

LAST week's debate in the House of Commons seemed to show general agreement on the necessity for deferment of military service at least for a small number of British railwaymen. It would probably be agreed that, apart from the proposal discussed below, that conscripted railwaymen should perform their service on the railway, only those 2,900 men in certain key operating grades should be deferred whom the Minister of Transport recently mentioned in the House of Commons. This would be on grounds of dire necessity, that is, of the railway manpower situation, and with full realisation of the weight of the claims of other industries, and of equity.

The case against deferment of railway workers was put last week, in a leading article in *The Manchester Guardian* —which is traditionally opposed to conscription in time of peace. The article expresses sympathy for the feelings of conscripted railwaymen, and states that appeals for their exemption are misguided. No responsible appeal, however, for deferment is based on the feelings of these young men; far greater issues are at stake. Nor has any appeal been made for total exemption of railwaymen, as against deferment of the military service of certain grades. The claims of shipbuilding and other industries are pressed in the article: most conscripts, it is said, "would be doing useful work if they were not in the forces." The answer to this is that it is a question not of "useful," but of essential work. The principle of equity also is raised: conscription, it is urged, must be shared by the whole community. The precedent of exemption for coalminers, states *The Manchester Guardian*, is based on acceptance during the war of 1939-45 that work down a mine, like that of merchant seamen, was "a personal contribution to defence comparable with military service." It is true that shortage of underground mineworkers was deemed during the war to justify a special status for them; but since the war, and notably in recent months, the shortage of railwaymen has been accentuated for various reasons, and is now not inferior proportionately to that of miners. Nor, if comparison in hardship is relevant or even possible, does the arduous and often dangerous work of some railway operating grades in wartime seem to demand fewer sacrifices.

The suggestion that railway staff problems must be solved "within the framework of society, not by special privileges and exemptions" ignores realities. The case for deferment would not be pressed so insistently by those conversant with the situation, if they did not know, first, that the difficulty in covering the duties of certain operating grades when conscripted is now dangerously acute, and, second, that a "spreadover" of duties would be difficult even after adoption of the proposals to work longer hours now under discussion between the Railway Executive and the unions.

Apart from the voluntary extension of working hours and the deferment of military service for the few operating grades mentioned above, considerable alleviation, if not a solution, of the manpower situation would result from the scheme which the Minister of Transport has in mind. In the course of the transport debate in the Commons, Mr. Barnes said that the problem is being examined whether "we can meet the military purpose of the call-up of personnel and at the same time marry it to the current needs of the time." Details of the proposal are not yet available, but the suggestion seems to be that conscripts should perform their military service whilst serving on the railway. That is, they should be given the modicum of military training essential for soldiers in the Transportation or Movements branches of the Royal Engineers whilst still carrying out the purely technical duties which they would perform as soldiers on active service. The suggestion is a compromise and as such open to many objections, more particularly from the military standpoint. In the circumstances, however, no better solution has been propounded.

Muddled Thinking on Railway Wages

TWO articles, side by side on the front page of the August 3 issue of *The Railway Review*, the organ of the National Union of Railwaymen, provide a striking example of some very muddled thinking on a subject which is of prime interest not only to railwaymen, but to the trade and industry of the country as a whole. The first of these articles is headed, "Application for Increase in Wages," and the second, "This is Just Too Bad." The first is contributed by the General Secretary of the N.U.R., and the second by the Editor of *The Railway Review*.

It is not possible to deal paragraph by paragraph with these articles, but there are some points in them which give some guidance as to their value. The first article deals with the background to the demand for a 10 per cent. increase in wages which was lodged last week by the three railway trades unions and which is estimated to cost up to £18 million in a full year. The General Secretary declares that the union has insisted throughout that only by the retention of the relativity between railway wages and salaries and those of "outside" industries as established by the Court of Inquiry would it be possible to retain and recruit reliable staff. Apparently the findings at the Court of Inquiry now attain a greater importance in the eyes of the union than they did at one time. Later, he talks of the expectation of the union membership that a course should be followed likely to produce a satisfactory conclusion of negotiations at the earliest possible moment, and that the Railway Executive would appreciate the necessity of conceding the application of a 10 per cent. increase. Seemingly, the union has returned to the view that direct negotiation through the established machinery is the best policy, and conveniently forgets that last time it went around it to the Minister of Labour and achieved its end in a somewhat unorthodox fashion.

A good deal of play is made in the article of what it calls the "almost unanimous appreciation by the responsible press of the country" that the relationship between railway and "outside" industry wages must be restored. It does not define what it means by "responsible press of the country," but in any event the Editor of *The Railway Review* in his article says, "the Capitalist press and the Conservative Party will make the most of their opportunities to discredit not only the principles of nationalisation but the whole structure and prospects of the Labour movement." This will be done, he thinks, if a solution is not found to the labour shortage on the railways, in which case the workers' disillusionment in the principles of nationalisation will grow. There does not appear to be unanimity between the General Secretary and the Editor on the subject of the press, at any rate!

The Editor of *The Railway Review* then puts forward some strange thoughts on the financial aspects of transport. He thinks that it is not true to say that the ownership of transport has been transferred to the public, but that what has happened is that the public has taken over the liabilities of transport operation, is paying high salaries to State officials to run the industry, and at the same time is rushing itself into economic ruin to pay interest on Transport Stock. To anyone conversant with the position that does

not require an answer. He goes on to argue that, by placing the interest of the owners of B.T.C. stock first, the State is depriving the workers of adequate wages and conditions of working. This ignores completely the fact that wages form part—and a major part—of working expenditure. Behind it all however lies the argument that the interest rate on Transport Stock should be reduced. A figure of 2 per cent. is suggested as " this would have given us a favourable balance." He adds naïvely that " there can be no justifiable objection to the reduction of interest charges by one per cent. The principle of compensation is not affected."

If there was any assurance that the arguments which will be advanced in support of the present wage claim would be no more cogent than those which appear in these two articles, the British Transport Commission might rest easy in the assurance that no impartial body would add to its labour costs.

Gas-Turbine Locomotive Progress in U.S.A.

ON March 31 the experimental gas-turbine-electric locomotive of the General Electric Company, U.S.A., which had been operating over the Union Pacific Railroad since July 28, 1949, returned to the builders after a very successful *début*—so successful, in fact, that the Union Pacific Railroad has placed an order for ten locomotives of this type. At the beginning of 1948 the locomotive was first placed on test at the works. It then ran experimentally over the Pennsylvania and Nickel Plate lines, and for a tour of 4,500 miles over various sections of the Union Pacific before taking up regular freight service over the Union Pacific on August 22, 1949. Of 105,732 miles run to date, 94,885 miles were on these regular U.P. freight workings, with an average train load of 3,635 tons (3,245 tons of 2,240 lb.), and up long and steep gradients leading to summits as high as the 8,013 ft. of Sherman, Wyoming. In this 19 months, the locomotive handled 344,950 million gross ton-miles of traffic on a total fuel consumption of 1,448,787 gal., 95 per cent. of which was Bunker " C " crude oil, or a consumption of 4·2 gal. per million gross ton-miles.

A second experimental gas-turbine-electric locomotive has been completed by the Baldwin-Westinghouse group and has been in service with ore trains on the Pittsburgh & Lake Erie Railroad. This is of the B-B-B-B type, 77 ft. 10 in. in length, with two 2,000-b.h.p. gas-turbine units mounted side by side which can produce a continuous tractive effort of 52,800 lb., a maximum rated speed of 100 m.p.h., and a weight of 460,000 lb. (205 tons). Each turbine drives a double armature d.c. generator through single-reduction gearing, and each armature supplies current to the two traction motors of one of the four bogies. The exhaust from one gas turbine passes through a water-tube boiler supplying steam for train heating, and a reserve supply of steam is produced in a train-heating boiler.

Train loads up to 2,200 tons (just under 2,000 tons of 2,240 lb.) have been handled. At first the fuel oil used was distillate, but since then experiments have been made with various residual oils treated with added inhibitors of different kinds with a view to reducing corrosion and deposition on hot turbine parts. Until now the only casualty of note has been the failure of the blading in one turbine, traced to the operation of the locomotive at maximum power pushing a heavy freight train at low speed through a tunnel. The temperature limiting control did not function properly, and permitted the gas inlet temperature to rise to 1,750° F. for about 10 min.

An experiment of even greater importance is that now being carried out by the Locomotive Development Committee of Bituminous Coal Research Inc.—a committee on which the nine principal railways in the Eastern States are represented as well as mining interests—with a gas-turbine plant for locomotive use fired directly with pulverised coal. This installation incorporates a 4,200-b.h.p. Allis-Chalmers locomotive type gas turbine, together with equipment for preparation and combustion of the coal, and removal of the ash particles. It has operated experimentally for 1,000 hr., divided into four continuous 250-hr. test periods. Many difficult problems have been overcome. The first was the persistent leakage of the highly aerated pulverised fuel between the drum and the housing of the types of feeder tried; the final solution was a rotary feeder with two counter-rotating drums. The problem of applying the necessary pressure to the fuel was solved finally by a star type of feeder with very small clearances.

Various types of burner were tested on the Houdry turbine before a satisfactory system was evolved. This consists of a stainless-steel enlargement of a jet-engine combustion chamber, into which coal is carried with air in the proportion of 1 lb. of coal to 1 lb. of air, at a velocity above 50 ft. per sec. The coal-air stream swirls out of the burner with a clockwise rotation set up by the tangential inlet, while the secondary air, which enters round the burner and is used to cool it, is given a counter-clockwise rotation by vanes. The resulting turbulence causes the flame to be short and intense. An oil-fired igniter is fitted in the combustor head.

The greatest problem has been that of fly ash from the coal and its effect on the turbine blades. During the first three 250-hr. tests, blade erosion occurred in various parts of the stationary elements of the turbine, though there was little in the rotating blades. This trouble has been cured by the system of three separators installed between the combustor and the turbine. The first is a louvre separator, and on passing the second, which is of the blow-down type, the combustion gases have lost all their large ash particles. The third unit is a bank of modified tube separators, and this removes almost the whole of the remaining ash, even down to particles no more than 10 microns in diameter (about 0·0004 in.). Preliminary tests showed that most of the turbine blade damage had been caused by fly ash particles of more than 25 microns diameter and that little trouble was to be expected from particles of 10 microns diameter or less. The rotor went through the 1,000 hr. of testing practically unaffected, except for a few slight nicks or dents at the tip of the blades.

As for the remainder of the plant, which is designed to fit within the limitations of the loading gauge, coal is carried to the rear of the stoker by a two-level screw, and is first crushed into lumps of not more than 2 in. in size. It is then dried by the exhaust from the turbine and lifted into a storage bunker. From here it passes through a Babcock & Wilcox pulverising mill designed to deliver about 4,500 lb. an hr. of powdered coal of between 90 and 200 mesh; it is then carried into a small storage tank through two discharge pipes by air at 3,000 cu. ft. per min. For space reasons twin combustors have been installed rather than one large combustor. An electric generator completes the power plant equipment.

The French National Railways in 1950

IN the annual report on the financial accounts of the French National Railways for 1950, Monsieur Pierre Tissier, President of the Administrative Council, states that the year was most difficult. Efforts to improve results were continued in the face of conditions made worse by insufficient credits allowed and low tariffs. Railway rates were much below the general level of prices and entirely inadequate for a rational distribution of traffic between rail and road.

Restriction of credits to fr. 55,000 million (about £55,000,000) for 1950 was all the more stringent because the S.N.C.F. already had to face obligatory expenditure of fr. 46,000 million resulting from previous compression of credits. The S.N.C.F. was forced to sacrifice many imperative industrial and technical requirements to financial difficulties even in limiting its own request for credits to fr. 85,000 million.

In submitting a budget drawn up on this basis, the S.N.C.F. had requested facilities to seek supplementary financial aid on the strength of its own credit, if State funds were insufficient to assure the total credits needed. The facilities were refused. If the S.N.C.F. were authorised to issue long-term loans to finance its reconstruction

and equipment expenditure, it would cease to be entirely dependent on the Treasury. Although the revival in freight traffic noted since last September has been confined up to the present, bringing results in this group up to a level higher than in 1929, the best railway year, the most recent budget estimates of the National Railways for 1951 show an insufficiency of some fr. 100,000 million.

At no time has the S.N.C.F. relaxed its persistent efforts to improve its output within the means at its disposal. The efficiency of the staff and the regularity of the service show constant progress. Numerous improvements in the running of passenger trains and the acceleration of freight traffic testify that improved results are not obtained to the detriment of high quality of service. The results are due largely to the advantage taken by the S.N.C.F. of technical progress and standardisation of working methods; extension of electric traction permitting the acceleration of heavier trains, increased average capacity of wagons and concentration of work in installations fitted with up-to-date equipment and to operations leading to better use of material and the working staff. As a result there was a considerable reduction in the number of staff employed.

In 1950 alone the staff was reduced by 20,000. This could not have been achieved if the railwaymen of all ranks had not maintained the sense of duty shown at the time of the country's liberation. These services were acknowledged recently when the government accorded an exceptional tribute in awarding the S.N.C.F. the insignia of Knight of the Legion of Honour.

On the subject of railway tariffs the report points out that the system of uniform rates irrespective of cost prices leads to making passenger and freight traffic on main traffic lines pay more than the real cost of the service. This makes it easy to understand why road hauliers take advantage of these main currents of traffic to "skim the cream off" the most remunerative and will continue to do so if uniform railway rates are increased more than the charges borne by road competitors.

During the first half of 1951, from January 1 to June 29, S.N.C.F. receipts rose to fr. 147,740 million, against fr. 118,000 million in the corresponding period of 1950. The increase from one year to the next was fr. 29,739 million (nearly £30,000,000). Freight traffic was the main contributor to this increase with a gain of about fr. 28,000 million, fr. 108,000 million against the previous fr. 80,000 million. Passenger traffic rose by only fr. 1,700 million—fr. 33,900 million against fr. 32,200 million. For the last week in June, receipts amounted to fr. 6,880 million against fr. 5,187 million for the corresponding week in 1950

B.T.C. Excursus on Statistics

(*By a Correspondent*)

THE British Transport Commission report for 1950 devotes a few paragraphs on pages 68 and 69 to British Railways operating statistics. The first result recorded is a decline of 1·3 per cent. in wagons forwarded and an increase of 1·5 per cent. in the average wagon load at starting point. "This is an important improvement," we read, "and it is a trend which has continued since vesting date," in the main due to larger wagons and better loading arrangements. Since 1948, average wagon capacity has risen by nearly half a ton to close on 13 tons, but there was no change last year in the loading of merchandise, which the railway staff perform to a large extent. Mineral and coal loads, over which the railways have little direct control, increased as in earlier years. Over the six years 1933 to 1938 mineral loads rose by 6·8 per cent. and coal loads by 4·2 per cent., despite the preference of most private wagon owners for small vehicles. During the 13 years 1938 to 1950, when the railways could extend the use of 16 and 20 tonners, mineral loads went up 10·7 per cent. and coal loads 8·5 per cent. The rate of progress has been slow, and the North Eastern Region, where the cult of the large wagon started 50 years ago, still leads the rest of the country by a margin of two tons in average load. The North Eastern and Scottish Regions alone keep their average load of merchandise above four tons.

The report then says that "train-miles were operated with a decreased number of train engine-hours," but the remark does not apply to freight services, apart from coaching services. Freight train-miles increased by 1,240,000, or 0·9 per cent., and 24,000 more freight train engine-hours were worked. Freight shunting-hours were 790,000, or 4·2 per cent., less, and this decrease effected "an improvement of 2·8 per cent. in the ratio of freight train-miles to total freight engine-hours," which "is now better than the average for the immediate pre-war years." The table below, giving results for four years before the war and for the last four years, throws a clear light on this comparison:—

FREIGHT TRAIN-MILES PER TOTAL ENGINE-HOUR

1935	...	3·68	1947	...	3·25
1936	...	3·59	1948	...	3·47
1937	...	3·55	1949	...	3·58
1938	...	3·70	1950	...	3·68
Average	...	3·63	Average	...	3·49

The former main-line companies have the better record, made in years when they ran a full and fast passenger service, and coped with the bane of private owners' wagons. It is the same story with the more significant statistic "freight train-miles per train engine-hour," not mentioned in the report. Last year British Railways registered a freight-train speed of 8·36 m.p.h.; the average speed for the four pre-war years was 8·98 m.p.h. and the 1938 figure was 9·15 m.p.h.

Turning to wagon-miles, the report comments on the ratio of loaded wagon miles to total standing at 72 per cent., in contrast to the prewar proportion of 67 per cent. The change is due largely to the abolition of private owners' wagons, and to altered methods of distributing coal and other basic commodities, which reasons also account to a great extent for an advance of 1·9 per cent. in "wagon-miles per total engine-hour." The last item is duly noted in the report, while nothing is said about the failure to increase the number of wagon-miles worked in a train engine-hour. At 224 that direct and vital statistic was 11 per cent. below the lowest of the four years before the war and 18 per cent. below the highest.

The report closes its survey with the statement that "the index of net ton-miles per total engine-hour improved to 578. The prewar figure (1938) was 450." That figure of 450 was for the main-line companies only; the figure for all railways, according to the Ministry of Transport returns for 1938, was 461, about the average result for the four prewar years. The difference is of little consequence, though the Commission suggests that the index "is perhaps the most important single statistic of efficiency for freight working." Most railwaymen put their faith in "net ton-miles per train engine-hour" as measuring the unit output of freight-train operation; the U.S.A. railways also work out "gross ton-miles per train engine-hour" and use the two statistics together. The first of these figures for British Railways was 1,086 in 1950, an advance of about 9 per cent. on 1947 and 1935, the best prewar year on this basis. The U.S.A. railways worked 11,670 net ton-miles in a freight train-hour in 1935 and 20,344 in 1950—an increase of 74 per cent. Concurrently, they worked only 54 per cent. more gross ton-miles in the train-hour, which is a clear proof that good railroading produces a higher paying load.

The figures just quoted are but one example of the upward trend of U.S.A. traffic statistics since the 1914-18 war. Much of the improvement can be attributed to the use of statistics which are plain to the men down the line. The work done by road locomotives is kept separate from yard performance, and abstract terms like "total engine-hour" are not to be found in the returns. Comparable figures from 1921 are tabulated in small space and represented in chart form. The B.T.C. report puts some operating statistics for 1938 and 1947-50 into diagram shape, but an accurate picture of railway developments before and after the war cannot be given without including the years 1935 to 1937. In these years the former companies improved their services and British Railways have a long way to go before they catch up.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Some Railway Shortcomings

July 30

SIR,—The letters from Nemo and the Chairman of the Railway Executive, and your leading article of July 20 deserve further contributions on this subject from railway officers.

Most of us can judge whether the points made by Nemo are sound and whether his remedy of consultation of officers, if indeed it is practicable in the sense in which he apparently intends it, would have alleviated the symptoms which he mentions, much less cut at the root of the disease.

The Chairman's treatment, with time as the great healer and a call to duty for each of us, is more convincing. The recovery of the railways between the wars was the combined result of the passage of time, brilliant leadership, and the team-work of the officers and higher clerical staff. Our leadership, even in the worst days of the depression—perhaps above all then—found incentives for all of us. Our work was absorbing. Railway officers' wives were a depressed and neglected class—their gardens tilled by other hands.

To recreate the conditions in which railway officers can give the sustained thought which the present difficulties demand requires first, relief from the hard necessity of devoting so much time and energy to other things—gardens, housework, supplementary sources of income and all the distracting bits and pieces of making ends meet—and secondly, the freedom in which thought becomes action with praise or blame to follow in its proper place.

Yours truly,

G. F. FIENNES

The Blue House, Lambourne End, Essex

August 1

SIR,—Much food for thought is provided by Nemo's letter, and your editorial article in your July 20 issue and Mr. John Elliot's letter thereon the next week.

With the greatest respect for Mr. Elliot and his remarkable achievements in staff relationships, and keeping in mind also his message to the staff on his appointment to the chairmanship, I venture to suggest that two very important aspects of this subject demand more attention now that they have received so much. It is my belief that Mr. Elliot will not mind; the really great man will always tolerate—often, perhaps welcome—honest and reasonable expression of opinions which are not always strictly in line with his own.

To my mind the two urgent problems are that resignations before retiring age and retirements at the minimum age are for too numerous, and that far too many of our customers are dissatisfied with our services.

The continuance of the first-mentioned will not only deprive the Executive and its less experienced staff of valuable knowledge and experience; each recession influences other staff and traders adversely. A dissatisfied customer undermines the confidence others might repose in us. All is not yet lost; we still have many good men and satisfied customers. It behoves us not merely to retain them but to add to their numbers.

Detention of those reaching retiring age unfortunately brings the other problem of deferring promotional prospects.

Perhaps I may comment briefly on Mr. Elliot's numbered paragraphs.

1. With experience of what happened in 1923 ought we not to have progressed more rapidly since 1948?
2. Certainly more progress has been made than many people realise (or admit) but many are convinced that more could have been made. If emotions, ambitions and disappointments adversely affect *thousands* is there not something seriously wrong? Surely the disappointments should be avoided; they could easily be cushioned. Twenty-eight years is a long time but one feels that the situation today does not compare favourably with the same period after amalgamation.
3. Undoubtedly fresh opportunities have been secured earlier. Are they not dearly bought if they involve sacrifice of ripe experience?
4. Herein lies the crux of the whole question. By all means let us think more of the railway service and less of self. Too often today hard work and goodwill are not appreciated and self-discipline has been confused with weakness.
5. Open minds with eyes fixed on the main objectives of better service to the public and real confidence between management and staff are not facilitated by the circumstances that cause men of ability to seek other outlets for their industry and initiative.
6. The opportunity to contribute towards the team spirit on our one railway undoubtedly exists; the trouble is that many who could grasp it don't. Why? What is to be done about it?

Mr. Elliot's word of thanks in his closing paragraph is typical; such gracious expressions inspire confidence and support. Can it be that his views of what exist today are coloured by his own happy experience on two Regions as Chief Regional Officer, and by his expert, extensive knowledge of what should be happening? It will be within his knowledge that Regions are swept and garnished against his coming. It is possible that in other respects Mr. Elliot is not assisted or encouraged to see things as they really are.

Does Mr. Elliot, one wonders, know the extent of the goodwill and helpfulness felt towards him by people whose whole life has been railways? If so does he ponder the reasons for much of it failing to be translated into action? A sense of frustration is not felt by your correspondent Nemo alone.

Yours faithfully,

NEMO II

August 1

SIR,—It was with interest but nevertheless astonishment with which I read the letter from Nemo and your editorial in your July 20 issue and the letter from Mr. Elliot in your July 27 issue.

All three are concerned with the personal interests of staff and, in particular, officers within the railway service—"job-control," as it is known in Australia—accompanied by an apparent complete indifference to and, or, ignorance of the real significance of the trouble in the railway service, which is the almost unanimous expression of dissatisfaction by the general public contained in letters to the newspapers and elsewhere. The public, irrespective of whatever system of promotion is in operation or the manner in which the railway service is "officered," has, under nationalisation, to put up without option with such service as is provided and in any case, foot the bill.

In this connection the debate which took place in the House on July 31 between Mr. Peter Thorneycroft, Mr. Robert Boothby, and Mr. Collick—not all belonging to the same political party—on the one hand and the Minister of Transport on the other, is relevant. As a railwayman I deplore the loss of that old spirit in some older railwaymen and the complete lack of it in many of the recruits, of feeling one was part of a great service.

Just quite what the general public does now think of that service is in my opinion cogently expressed in the remark made to me by a woman when she exclaimed: "I would never travel by railway if I could possibly avoid it, and is it necessary for porters to shout 'shut them doors'?"

Yours faithfully,

FRANK THEODORE

34, Clarence Road, N.22

Refrigerated Vans in Patagonia

July 30

SIR,—I would like to confirm the correctness of Mr. Macintyre's statement in your July 27 issue that the photograph of a converted refrigerator van published by you on April 20 relates to a Drewry and not a Ganz railcar. By all reports the Ganz cars used on branch line work by the General Belgrano and other sections of the Argentine railway system are giving much too useful service in the purpose for which they were originally designed to permit of conversion for odd jobs such as that illustrated by you. The majority of these Ganz cars have by now averaged over 1,000,000 km. each in service with the original engines showing no signs of requiring replacement.

At the same time I fear Mr. Macintyre is not quite so correct in stating that Drewry cars replaced laid-up single-unit Ganz cars on the Patagonian railways. Two Drewry cars were transferred to the Puerto Deseado section where Ganz cars have never operated, and two further Drewry cars and one additional Ganz car were transferred to the Comodoro Rivadavia section to supplement the excellent service maintained on that section without interruption since 1937 by the existing two Ganz cars. As often proves the case with railcar operation they had developed the traffic beyond their own ability to cope with it.

Yours faithfully,

D. M. RYAN

Little Parkhurst, Abinger Common, Surrey

Improved Franco-Swiss Connections

July 28

SIR,—It was of interest to read on page 65 of your July 20 issue, that steps are at last in contemplation to improve the Franco-Swiss train services *via* Delle. It is difficult to understand why this important international route has been so neglected since the war. Before the war, it was possible to travel between Paris and Berne *via* Delle in 7¼ hr.; today, the only two trains, one day and one night in each direction, require from 9 hr. 7 min. to 9 hr. 54 min.

It is far quicker to travel *via* Basle, although over a longer route (633 km. compared with 576 km.); if the two high-speed diesel trains are used between Paris and Basle, the Paris-Berne journey can be made twice daily in each direction in from 8 hr. 3 min. to 8 hr. 38 min. Actually the shortest route between Paris and Berne is *via* Dijon and Les Verrières (560 km.), and since the accelerations resulting from the Paris-Dijon electrification, this also has become quicker than the Delle route, the day and night service in each direction taking from 8 hr. 48 min. to 9 hr. 41 min. for the journey.

Before the war, it was possible throughout the year to travel direct from Boulogne to Berne and Interlaken *via* Delle in connection with the 4.30 p.m. from Victoria; this service is now available in the height of the season only, and during the remainder of the year the only through communication is the train which makes its way in leisurely fashion from Calais through Lille, Mezières, Thionville, Metz, and Strasbourg to Basle and Berne, leaving London at 2 p.m. and not reaching Berne until 8.30 a.m.

The Delle route suffers from two disadvantages. The first is the 13-mile steam link between Belfort and Delle, before the Swiss electrification is reached; the second is the absence of restaurant car facilities between Delle and Berne. This summer even the welcome restaurant car which greeted Anglo-Swiss passengers at Porrentruy, and served them with breakfast after their long night journey from Boulogne, has been withdrawn, and with it the return working as a dining car on the 7.5 p.m. from Interlaken to Boulogne.

The Berne-Loetschberg-Simplon Company has, I believe, been pressing the Swiss Federal Railways, which now control all the internal Swiss restaurant car services, for the provision of a restaurant car on the 10.43 a.m. from Brigue to Delle, which carries Milan-Paris passengers through Switzerland without meal facilities, and equally on the 6.51 a.m. from Porrentruy to Brigue, the corresponding return working. With the train service at present timetabled, incidentally, three restaurant cars, working shuttle fashion, could provide all three existing Franco-Swiss trains with restaurant accommodation between Porrentruy and Berne, both ways, as well as all the six principal trains in each direction between Berne and Brigue *via* the Loetschberg; today the two daily restaurant car services in each direction daily between Berne and Brigue compare unfavourably with the ten over the Gotthard route, even allowing for the much greater passenger traffic over the latter.

As to the proposed improvement of the through passenger service *via* Delle, a fast railcar connection from Belfort to Berne, a distance of only 82½ miles, ought to bring the Swiss capital within 7 hr. of Paris, even allowing for frontier formalities, seeing that the high-speed French diesel trains reach Belfort in 4¼ hr. from Paris. In addition to Berne, such a service would be of great value to Biel, centre of the Swiss watchmaking industry, and to the Bernese Oberland.

The expansion of the through services *via* Delle might also provide some compensation to the Berne-Loetschberg-Simplon Company for the heavy cost it expended in boring the 5¼-mile Grenchenberg tunnel through the Jura, part of the 8-mile Moutier-Lengnau cut-off which greatly improved the original line from Delle to Biel and Berne.

Yours faithfully,

CECIL J. ALLEN

70, Rowlands Avenue, Hatch End

Advertising Vacancies

July 26

SIR,—Your editorial reference in the July 20 issue to the shortcomings of the system of advertising vacancies tempts one to ask whether any system for finding a tenant whose tenure is guaranteed could be more crude. I am quite certain that more science is applied to forecasting football results and I certainly hope the Test team is not chosen on seniority and a ten-minute interview.

Finding the right man for a job is a very difficult task with no known formula on which to work. But to reduce the problem to simple arithmetic and a dash of intuition is only to beg the question. It favours the man who does just enough, well enough, to get by. It chokes initiative and enterprise, and the railways, who rarely pay for these qualities, are indeed fortunate to get as much of them as they do.

Not only are the promotion arrangements to blame. The railways appear terrified of initiative, probably because they fear they may have to pay for it, and discourage it, unwittingly maybe, whenever possible. It might release unbounded business dynamic if they offered a prize for the boldest decision, regardless of the consequence, made each week. Alas! for this bright idea—Jack's in office and Bumbledom conquers all.

What alternative exists? Maybe it is better to keep the devil we know until a more agreeable one is found. Fortunately research on the subject continues and future candidates may have to square circles and solve Chinese puzzles before they are promoted. There is, however, one interesting suggestion from the U.S.A.: it is for each candidate's ability to be reported on by his superiors, peers—and his subordinates. This may seem absolute nonsense but oh! how intriguing.

Yours faithfully,

GEO. F. THOMLINSON

56, Stockens Green, Knebworth

NATIONAL SAVINGS MOVEMENT.—From the beginning of October until March, 1952, the National Savings Movement, with its 300,000 voluntary workers, will be engaged in an intensive "Lend Strength to Britain" drive for more savings to help finance the rearmament programme and to check the rising cost of living.

THE SCRAP HEAP

Love Off the Rails

Wife of a dentist sued for divorce in Piedmont, California, because, she said, he thought too much of his £1,250 train set. She asked for custody of the trains.—*From the "Sunday Express."*

A Major Disaster?

Somewhere in London there was a major with the luggage of 38 schoolgirls and four teachers. It was given to him by mistake for his own luggage at Victoria Station luggage office. The school party went on a holiday trip to Paris without a nightdress between them. —*From the "Daily Express."*

Slowing Down the Southern Region

A small dog appeared on the Southern Region line between St. Margarets and Richmond. With tail erect it boldly preceded two trains, which were forced to slow to walking pace, and then it ran off the line and disappeared. First, the dog walked along the up line, glancing over his shoulder occasionally at the motorman of the 7.44 a.m. Shepperton to Waterloo. Then he skipped across to the down line just in time to steady down the 7.54 Waterloo to Windsor.—*From "The Evening News."*

The "Lion" Filmed Again

For the second time since its reconstruction to run under its own steam at the Liverpool & Manchester Railway centenary celebrations in 1930, the locomotive *Lion* built for that railway in 1838 by Todd, Kitson & Laird, has taken part in a film. In 1937 it appeared in the film "Victoria the Great." On June 4 last, hauling three coaches built to Liverpool & Manchester designs for the 1930 celebrations, it ran on the Welwyn Garden City—Hertford North branch of the Eastern Region at Cole Green, temporarily renamed Whatstandwell, where scenes for a film about Florence Nightingale, entitled "The Lady with a Lamp," were shot. The *Lion* was sold by the L.N.W.R. to the Mersey Docks & Harbour Branch in 1859 and was used as a stationary engine until 1928. Its present owners, the Liverpool Engineering Society, restored it. Although normally exhibited at Liverpool Lime Street the engine is now stored temporarily at Crewe; the coaches are stored at Derby.

Engine Assembling Record

In 1851, at the former Great Eastern Railway works at Stratford, a team of railway engineers completely assembled a 67-ton goods engine and tender in the remarkably short time of 9 hr. 47 min. The feat was our reply to an American record of 16 hr. 52 min. and has never been equalled since. I wonder how long it would take today.—*From a letter to "Tit-Bits."*

Argentine Railways for Nothing

An astonishing speech by General Peron, the Argentine President, is reported in *The Financial Times*. Peron boasts of his country's business acumen in buying the British-owned Argentine railways in 1947.

"We invited the English to come here and they asked 8,000 million pesos," says Peron. "We offered 1,000 million. Naturally they were not pleased. But . . . we were able, after six months, to get the railways for 2,029 million pesos. Since we had no money," he says, "we paid with wheat. That we bought at prices which fully compensated the farmers and left them very happy. We then sold the wheat abroad at a higher price. The result of this was that we paid only one-third of the 2,029 million pesos—that is about 700 million."

But, said Peron, the Argentines did not possess these 700 million pesos, either. How then did they manage to pay? They sold some of the 23,000 properties which they took over with the railways.

Boasts Peron: "The railways did not cost us a single centavo. . . . Not only have we bought the railways, but we have made a very great deal on all these operations."—*From a "Londoner's Diary" in the "Evening Standard."*

Wages and Transport

It would perhaps be unfair to describe the claim for a 10 per cent. increase in wages jointly presented by the three railway unions as the first psychological reaction to dividend control. Certainly the Commission, with its mounting deficits, can hardly have excited the envy that Mr. Gaitskell claims to find among the trade unionists as a whole in their attitude towards dividends. But it is certain, without need for question, that the claim has been encouraged, and will be almost impossible to resist, by reason of the way in which last February's increase came to be granted—namely, by the intervention of Mr. Bevan, then Minister of Labour, in demanding a settlement on his terms and overriding the Railway Executive's views. The increase now claimed would cost practically £20 million a year—which is roughly the size of the current deficit on the Commission's revenue account. It is questionable whether the normal process of negotiation is worth proceeding with after the experience of six months ago.—*From "The Economist."*

The "Lion," built in 1838, *running under its own steam near Cole Green (Herts.) for the filming of "The Lady with a Lamp"*

Realignment

Here, beyond Johnsonville, where the "Limited" once climbed,
It's quiet now. Only the wind in the gorse,
And a sheep crunching the grass in your course.
The cuttings are crumbling. Weeds have twined
Themselves round the wrecked bridge. bind
Up its trestles. But there's no call for remorse.
A mile away, the new line's straight discourse
Declaims against you to a progressive wind.
Double-tracked, electrified, direct, and gently graded
You cut across the rivulets. Your blades sever
The mountains. Your track fulfils
Its function better than the old; but faded
Memories cannot regain their colour. ever.
Oh for two pillars of smoke high in the hills!

W. D. G.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Grootvlei-Redan Line

The Minister of Transport, Mr. P. O. Sauer, opening the new Grootvlei-Redan line recently, appealed to industrialists to consult the railway administration before embarking on new schemes of any magnitude. The very important rôle which the railways play in industrial development is not, he said, always fully realised, with the result that often no proper provision is made for essential rail facilities. Mr. Sauer said that railway development is given first priority and that no essential expansion scheme has been abandoned. In 1947-51 traffic increased 20 per cent., whilst the carrying capacity of the railways had increased 30 per cent.

Mr. D. H. C. du Plessis, Acting General Manager of Railways, said that provision had been made in the current estimates for the expenditure of £25,000,000 on new workshops, workshop improvement, and running sheds, including new machinery. Since 1943, 457 new steam locomotives had been acquired at a total cost of approximately £10,000,000, and 38 new electric units had been placed in service at a cost of £1,600,000. In the past eight years 24,000 wagons had either been completed in S.A.R. & H. workshops, built by private industry in South Africa, or imported, at a total cost of £38,000,000. They had spent £3,098,000 on the construction of new lines, including the Grootvlei-Redan line, the estimated cost of which was £1,790,000.

The reserve of coal in the Grootvlei area is estimated at 200,000,000 tons. The new line has been built primarily to supply coal to the Klip River power station, the largest steam-driven power station in the Southern Hemisphere. It will transport about 90,000 tons of coal a month for the first 18 months, and after that about 190,000 tons monthly. It will also carry the farming produce to industrial centres in the Southern Transvaal.

RHODESIA

Proposed New Lines

Attention is being directed to two proposed new lines. A survey is being made of a possible route following a south-easterly direction from the Shabani branch, to Lourenço Marques, crossing the Portuguese border at Pafuri. In some parts this survey is traversing wild country hitherto unexplored. The prospective route has much in its favour, with particularly easy gradients almost throughout. A new port connection along this route would lead into Gwelo, in the centre of Southern Rhodesia, thus avoiding congestion at Bulawayo.

An inter-territorial hydro-electric power commission set up by the Central African Council has recently urged the construction of a Sinoia-Kafue rail link to facilitate the contemplated Kariba Gorge scheme, which is to harness the Zambesi River at a cost of over £74,000,000.

It is certain that the relatively short connecting link between Sinoia and Kafue must come. The route, however, is through difficult country and would involve a major crossing of the Zambesi and many other bridges, but it would bring the copper belt within 950 miles of Beira, saving 527 miles in rail distance. These two projects are to be considered by the governments concerned and by the Rhodesia Railways.

Budget

Some £14,000,000 have already been spent to enable the railways to handle increasing traffic, and the railway budget for the triennium ending March 31, 1954, covers capital expenditure of £17,750,000, including European housing, £2,250,000; African housing, £1,000,000; locomotives and rolling stock, £8,500,000; branch lines, deviations, etc., £1,200,000; traffic and operating facilities, £2,300,000. After that an additional £8,000,000 will be required to enable the railways to cope with traffic—principally coal—which will develop by 1956.

Working Results

Over the lines north of Bulawayo all classes of passenger traffic, especially fourth class, showed an increase; the total number of passengers carried was 2,420,800 as against 2,374,222 in the preceding 12 months.

Coal and coke increased by 263,452 tons to 2,167,165 tons; other minerals increased by 153,935 tons to 1,351,076. General goods at 2,724,492 tons were greater by 447,685 tons than in the previous year. The grand total tonnage carried was 6,242,733 tons, an increase of 865,072 tons.

EGYPT

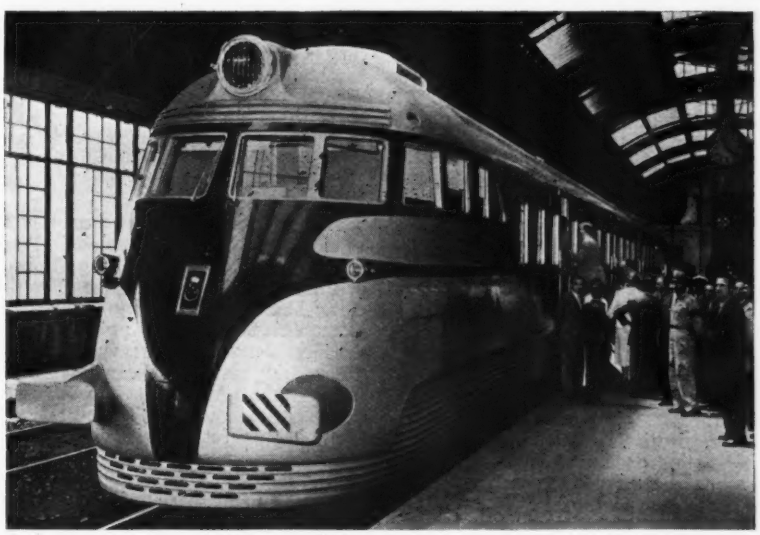
Royal Railcar Set

A railcar set built by the Fiat works at Turin for the Egyptian State Railways and intended for royal use was on view at Milan Central Station on July 18, after its initial journey, conveying the King and Queen of Egypt between Venice and Como.

The set consists of two articulated and intercommunicating coaches, the one a diesel-powered driving coach, the other a trailer. The length of the set is 152 ft. 6 in., and its width nearly 9 ft. 10 in. The set is of all-steel construction, and weighs 114 *tonnes*. The driving coach is fitted with two 12-cyl. SDB-type Saurer O.M. diesel engines built under licence by Officine Meccaniche of Brescia. The cylinders, arranged in two rows of six, have a bore of $6\frac{5}{16}$ in., a stroke of $7\frac{1}{8}$ in., and a cubic capacity of $48\frac{1}{4}$ litres.

Each engine is underslung immediately behind its bogie, mechanical transmission being provided, and the gearbox has five forward and five reverse speeds. The maximum speed is $80\frac{1}{2}$ m.p.h. at 1,400 r.p.m., continuous rating. The capacity of the fuel oil tanks enables the set to cover 995 miles without refuelling. The price of the set complete with its entire outfit of the royal apartment has been stated to be lire 400,000,000 (approximately £225,600).

The front of the driving coach has been decorated with the royal arms surmounted by half-moon and stars. Behind the driving compartment is a com-



Diesel railcar set, built by Fiat for the use of the King of Egypt, being inspected at Milan

partment intended for the staff and attendants, adjoining a compartment for the royal suite. At the rear end of the driving coach is a kitchen. The royal apartment is in the trailing coach, and consists of a drawing room, dining room, bedroom with adjoining bath, kitchen and compartment for the suite. There is telephone connection between all rooms and compartments of the entire set.

CANADA

New Works on C.P.R.

A total of $17,187,000 is being spent this year by the Canadian Pacific Railway for improvements to track and right-of-way, new buildings, signals, and other items in Eastern Canada. The appropriations cover 1951 work on lines from the head of the Great Lakes to the Atlantic seaboard. In this area $10,421,000 will be spent on track and roadbed, $2,974,000 on bridges and building, and $3,311,000 for other improvements on C.P.R. lines. In addition, $133,800 will be spent on electric lines radiating from Preston, Ontario, and $32,000 on Bay of Fundy steamships. Some $238,000 has been spent on reconditioning the two Great Lakes freight and passenger ships.

Extension of Montreal Windsor Station facilities for handling of parcels, mail, and baggage will cost $1,147,000 and further building at Côte St. Luc yard will absorb $1,101,000; construction of icing platforms at Glen yard will cost $35,000; at Drummondville 1,500 ft. of business track will be installed at a cost of $10,130; and at Quebec City a new team track and roadway will cost $30,900.

Wage Demand

With their wages fixed until September, 1952, by an arbitration award, railwaymen are making increasing demands on unions to re-open the wage question. Discussions have not yet gone above the local and general committee levels, but it is reported by union officers that the pressure is increasing for a review of the wage position at the highest levels. It is likely that talks will be held between the Canadian Brotherhood of Railway Employees and the American Federation of Labour railway brotherhoods.

Under the Kellock arbitration award last December, approximately 122,000 non-operating railway workers received a 7 cent an hour increase from the previous September, and a 40-hour week, with pay for 48 hours, on June 1, 1951. The arbitration award precluded any further wage increase until expiration of the agreement on September 1, 1952. Since the 7-cent increase, the cost of living index has climbed from 169·8 to 184·1.

Mr. Justice Kellock noted in his award that on September 1, 1950, railway workers needed 10 cents an hour if they were to keep up with the cost of living since their last wage increase in 1948. He forecast that the relations between wages and living costs would further deteriorate during the lifetime of the agreement. Against this he placed to economic advantage of the 40-hour week, which, he said, would enable an employee to do other work one day a week. On the basis of the formula of 1 cent an hour for every 1·3 rise in the cost of living, the 14·3 increase since September would be equivalent to 11 cents an hour.

SPAIN

Centenary of Aranjuez Line

The centenary of the Madrid-Aranjuez line was recently celebrated in Madrid. This was the second line in Spain, and the first serving Madrid. It originally linked Madrid with the royal residence at Aranjuez, the country retreat of the royal family, and subsequently became the first section of the Madrid-Alicante main line.

ITALY

Straits of Messina Train Ferry

Two new diesel ferryboats are in operation, which facilitates economical working. Another ferryboat, sunk during the war, has been refloated and reconditioned with some important improvements. Another vessel has also been recently repaired. During the recent bumper citrus fruit crop, these ferryboats, with a small steam vessel, transported as many as 1,500 wagons in both directions in 24 hr., a record.

The greater number of freight wagons conveyed by the ferry has made it possible to augment the number of braked freight trains to and from Villa San Giovanni, the mainland ferry terminal. This has resulted in higher average train speeds between Villa San Giovanni, major centres in Italy, and frontier stations, especially in the case of trains carrying perishable goods.

FRANCE

Rise in Paris Metro Fares

Fares on the Paris Metro and bus lines were increased on August 6. On the Metro the new flat fares are: second class single 30 francs (instead of 22); first class single 45 (instead of 35). A book of tickets for ten journeys now costs 200 francs, or 20 francs per journey. Workers' weekly cards cost 160 (instead of 120). On the bus lines, a single season ticket now costs 15 francs (against 12).

These increases were voted on July 24 at a meeting of the Regional Paris Transport Office, called by the Minister of Public Works & Transport after the Office had refused in May to vote any increases. Some critics point out that the increases will be a heavy burden on the working classes and can be justified only on the ground that the R.A.T.P. (Régie Autonome des Transports Parisiens) has no funds at its disposal. Its financial estimates for 1951 show an expenditure of 35,000 million francs; receipts on the basis of the present tariffs are put at 27,500 million. Of the deficit, only 4,000 million francs will be covered by grants from the central Government and local authorities.

It is reported that a committee of passengers has decided to send delegations to the Minister of Public Works & Transport to ask for an emergency subsidy to the R.A.T. P. so that the former fares may be restored.

AUSTRIA

Progress in Electrification

Postwar electrification of the Federal Railways began in the Spring of 1946, but at first progressed very slowly because of the difficulties in acquisition of building material and the shortage of manpower. In 1948, conditions improved and the new financial situation permitted work to proceed. The first phase was completed in 1949, when the Bregenz-St. Margarethen and Attnang Puchheim-Linz sections were opened to electric traffic.

In May, 1950, electrification of the Spittal - Millstättersee - Villach section was completed. The operation of electric traffic on the Bischofshofen-Eben line, on which other work has already been completed, depends on completion of the reconstruction works at present in progress in a tunnel on that line. Electrification of the Linz-Vienna main line has now arrived at the point at which completion of the Linz-Amstetten section can be envisaged this summer. The remaining section to Vienna may be completed at the end of 1952. This will mean electric traction throughout from Bregenz to the new Vienna West Station.

Power for new electrification will be provided by the Uttendorf power station at Zell-am-See, as well as by the Braz power station near Bludenz, which is still building. Acquisition of new electric locomotives is a matter of urgency, as the number of those at present in service is inferior to that in 1937.

NORWAY

Electrification of Voss Railway

The State Railways are working on electrification of the Bergen-Voss line (67 miles). Pylons have already been erected. There are many sharp curves, and 70 tunnels, and before electrification, various civil engineering works must be completed.

Reclining Chair Coaches

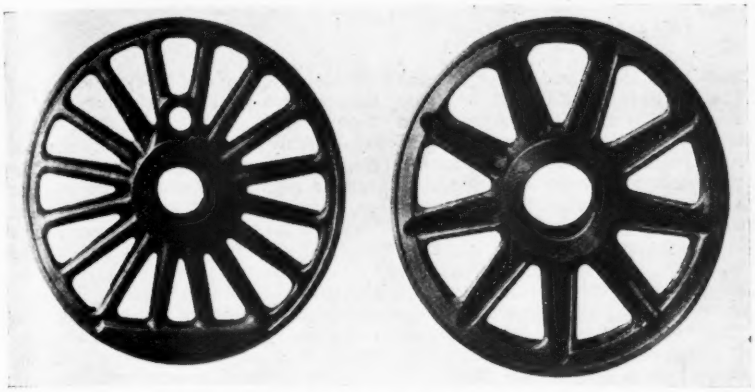
The State Railways recently ordered 20 all-metal centre-corridor coaches, to be constructed entirely in Norway. Ten will be delivered this year; they will have reclining seats of American type, which are already in use on the Bergen Railway. The new coaches (third class only) contain 64 reclining seats.

Kongsvinger Line Electrification

On June 14 the electrification of the Kongsvinger line was inaugurated in the presence of high Norwegian and Swedish officials. This line represents the oldest connection between Oslo and Stockholm, having been opened in 1865. As a result of electrification there is a gain of 55-60 min. on the journey between Oslo and Stockholm.

A New Design of Locomotive Wheel Centre

Channel section rim and "U" shape spokes to resist thrust and save weight



Outside and inside faces of new wheel centres

IN recent years considerable attention has been paid to the design of cast-steel locomotive wheel centres in an endeavour to produce one appreciably stronger than those of orthodox design. The object has been to eliminate the cracking of spokes, and to provide a more rigid rim for the support of the tyre, at the same time avoiding any increase in weight.

As a result a locomotive wheel centre, known as the SCOA-P, has been designed by the Steel Company of Australia Pty. Ltd., and a manufacturing licence for this has been granted to K & L Steelfounders & Engineers Limited, one of the "600" group of companies. In collaboration with the latter firm the Vulcan Foundry Limited is responsible for the design of SCOA-P wheels for locomotives built in territories other than Australia.

Features of the Design

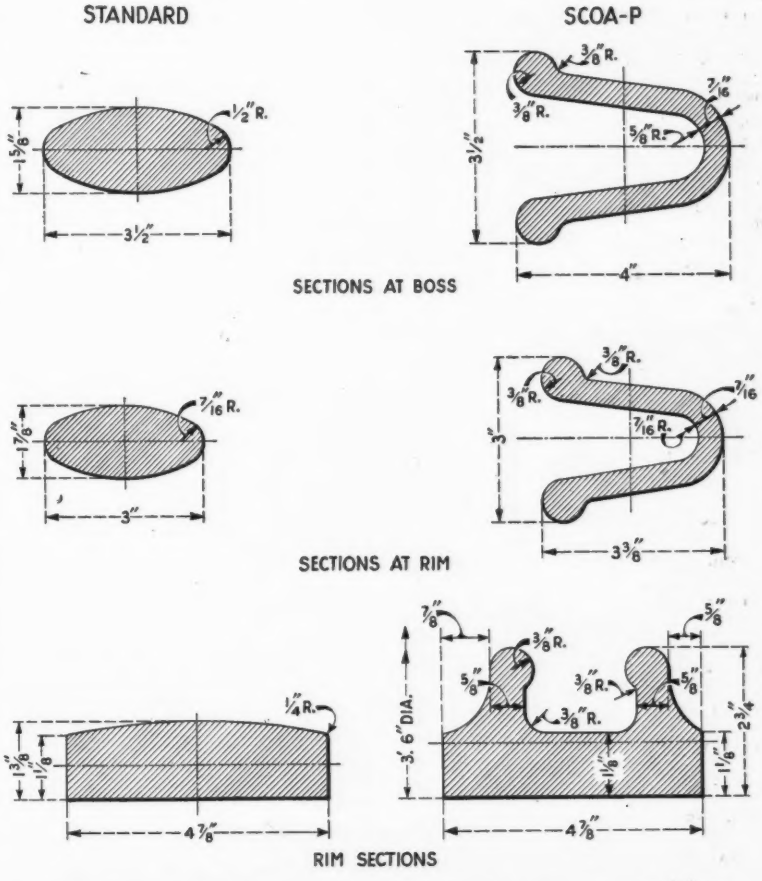
Features of the new design are the replacing of the orthodox oval spoke by a spoke of "U" shape section together with a wheel rim of channel form in section. It is claimed that, while the accessibility of the spoke type of wheel has been retained, the metal has been disposed of in such a way that a particularly strong form of wheel centre has been produced, with a saving in weight of between 3 and 5 per cent.

It is also claimed that the channel section design is more resistant to deflection between the spokes, thus reducing the tendency to loose tyres attributed as a rule partly to rim deflection, and that the spoke of "U" shape section better resists lateral and radial thrusts in addition to compressive loads due to rail loads. The possibility of undiscovered cavities at the junction of the spokes and wheel rim is said to be prevented by the blending of the "U" shape spokes and channel rim.

The Vulcan Foundry Limited recently supplied 35 locomotives to the Queensland Government Railways for mixed-traffic operating on the 3 ft. 6 in. gauge section of the railway to which the SCOA-P wheels were fitted; the locomotives were described and illustrated in our March 16 issue. The engines were designed with a coupled axle-load of 12 tons. The same firm is now building thirty 4-6-2 locomotives for the Gold Coast Railway to which these wheels are being fitted.

SCOA-P wheels have also been fitted to steam and diesel-electric locomotives for the Tasmanian Government Railways and to "R" class Victorian Government Railways locomotives. They have been specified for "WM" and "YL" class locomotives for the Indian Government Railways and are being supplied for use on the Spanish and Iranian State Railways.

RAILWAY POLICE CONFERENCES (APPOINTED DAY) ORDER, 1951.—The Minister of Transport has made the following Statutory Instrument under Sections 97 and 125 of the Transport Act, 1947: The Railway Police Conferences (Appointed Day) Order, 1951. Copies may be obtained from H.M. Stationery Office, Kingsway, London, W.C.2, price 2d.



Typical sections showing comparison between standard and SCOA-P wheel centre designs

Mercury Arc Rectifiers in Traction

Fields of use other than in sub-stations converting alternating to direct current

(*By a Correspondent*)

IT is still the most cogent criticism of electric traction as compared with steam or diesel traction that it necessarily involves elaborate and costly fixed installations for the supply of current to the rolling stock. That the past 15 years have shown a steady reduction in the costs of installation and maintenance of the fixed equipment is the direct result of the growing use of mercury arc rectifiers for traction substations feeding d.c. to the track. It may be that the mercury arc rectifier may yet offer an equally significant contribution in quite a new way to traction technology where new railway electrification schemes are under consideration.

The mercury arc rectifier shares with the transformer the advantage of having no moving parts and hence no frictional losses. Although its efficiency, of some 95 per cent., is considerably lower than that of the transformer this is nevertheless substantially better than can be attained by rotating machines fulfilling the same function, such as the rotary converter and the motor-converter. Before the advent of the sealed steel tank pumpless air-cooled rectifier the necessity for evacuation pumps and other auxiliaries detracted somewhat from the advantages gained by high efficiency and tended to reduce reliability; considerable maintenance was also required.

It was the general experience in fact that breakdowns in the earlier sub-stations with water-cooled pump type rectifiers resulted from defects in the auxiliary equipment rather than in the rectifier proper. Perhaps this early experience has been one factor in retarding the elaboration of rectifiers by the addition of more electrodes for other functions besides the straightforward supply of direct current from alternating current.

Effect of Grid Control

It has long been known that the addition of grids to the mercury arc rectifier is practicable, and an article in *The Railway Gazette* of December 31, 1948, described the use of grid control for the acceptance of regenerated energy in the form of d.c. and its conversion to alternating current. Further experimental work is needed to make such arrangements entirely satisfactory, but they have been used successfully in various areas where the gradient conditions make regeneration worth while.

The application of m.a. rectifiers to d.c. supply, regenerative or otherwise, may be said to be solved, and it is natural that attention should be directed to other traction applications. Among these, the American experiments with rectifier locomotives and motor coaches on the Pennsylvania Railroad, reviewed in *The Railway Gazette* of April 7 and June 16, 1950, are attracting most interest, particularly since the application of rectifiers to motor coaches indicates that the weight problem is on the way to complete solution.

Some considerable advance has been made since 1935 when four German firms were each commissioned to produce one prototype rectifier locomotive. Of these four firms, two decided at an early stage in design that difficulties were too great, and of the other two one adopted grid control, and after completion decided that due to weight, cost, and technical difficulties it was unlikely that further machines would be ordered.

Although the rectifier locomotive holds great attraction for the engineer in that a combination of grid control and transformer tappings gives, more simply and efficiently, all the control that can be obtained by resistances and contactors, it has the disadvantage of being heavy. An American comparison shows that the new Westinghouse 6,000-h.p. S.-P. rectifier locomotives have a 30 per cent. higher continuous rating than existing locomotives with single-phase commutator motors, but 40 per cent. higher weight. Their peak rating shows little advance over that of the commutator motor locomotive.

The rectifier locomotive does, however, offer one great advantage in comparison with the majority of existing single-phase commutator equipments; it can be run from a 50-cycle supply so that power can be taken from the ordinary industrial network without the necessity for heavy and elaborate rotating conversion machinery. It may be that this advantage will outweigh other disadvantages in comparison with non-industrial frequency single-phase locomotives. It is evident, however, that, should 50-cycle single-phase traction be adopted on a large scale, the principal remaining advantage of the rectifier locomotive—that of simplified control gear—would hardly be adequate to compel its adoption on a wide scale.

Reference has been made to the conversion of current from the 50-cycle network to lower frequencies (usually 16⅔ cycles) for single-phase commutator motor traction. In this field, where hitherto rotating frequency changers have been the rule, the mercury arc rectifier can provide a somewhat imperfect alternative. In Switzerland and Germany, where experimental sub-stations have been built and put into service, various arrangements have been used.

In one of these using grid control the incoming 3-phase 50-cycle a.c. is fed through 3/6 phase transformers to two 6-phase grid-controlled rectifiers. Here, by suitably arranging the sequence of impulses to the control grids, it is possible to synthetise a new current wave at the correct low frequency. The current wave so formed is by no means a sine wave; it is of rectangular form and the voltage wave is very "peaky." It is, therefore, essential that elaborate smoothing equipment be included, with radio interference suppression arrangements of a very complex type. For the German substation of this type built before the war, one of the largest reactors in the world was built, thus counterbalancing the inherent advantage of lightness which the rectifier possesses over the rotating frequency changer.

In another system also using two rectifiers they are grid controlled, so that one rectifier is in operation during 1½ cycles of the 50-cycle supply giving a d.c. pulse in one direction. The second rectifier gives a pulse in the opposite direction for 1½ cycles so that a complete low-frequency cycle consisting of two trapezoidal half-cycles is obtained every 3 cycles of the 50-cycle supply.

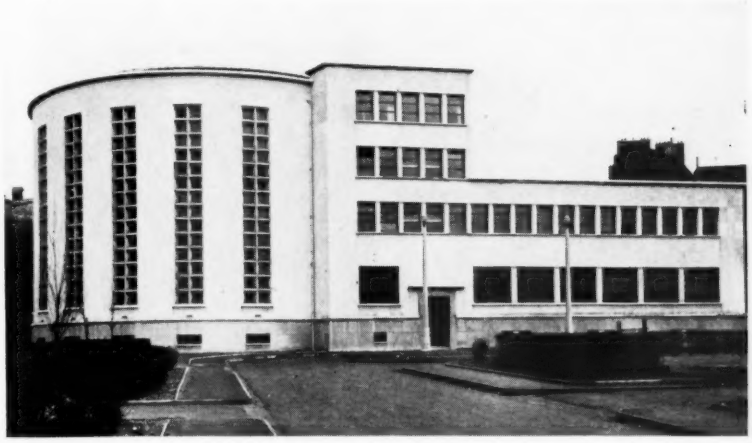
Improved Grid Control

In this system the frequency conversion is tied to a ratio of 3 : 1, and there is difficulty in obtaining reactive power with it; usually a synchronous condenser has to be included in the circuit to supply reactive power. It is impracticable to use a rectifier frequency changer as the sole means of feeding the single-phase traction network; it is essential that the network be supplied also from a conventional source. It should also be mentioned that, although the system is static, it is by no means cheaper than the rotating system. There has been considerable liability to backfires—at the rate of 20 a month—but this has now been reduced to two or three a month by improved grid control. It is doubtful, however, whether any great advantage can be expected to result at the present time from existing arrangements.

ALLOY AND STAINLESS-STEEL SCRAP PRICE CONTROL.—The Minister of Supply has made a new Order which provides maximum prices for scrap alloy steel as from August 1. The Order—the Iron & Steel Scrap (No. 3) Order, 1951, Statutory Instrument 1951, No. 1359—reimposes price control on the main specifications of alloy steel scrap. It also brings all the important specifications of stainless-steel scrap under statutory price control for the first time. Copies may be obtained from H.M. Stationery Office, Kingsway, W.C.2, or through any bookseller.

The Paris-Laroche Electrification

Operating, signalling, and staff training involved in the latest stage of the Paris-Lyons scheme, S.N.C.F.



Control centre in Paris

AFTER the running of the inaugural electric train from Paris to Laroche on August 29, 1950, all services on this section of the S.N.C.F. Paris-Lyons electrification scheme were handed over progressively to electric traction. At first the existing steam schedules were retained, but new and improved timetables were introduced for the winter services beginning on October 8, 1950, by which time all trains were hauled by electric locomotives. From this date travellers began to experience the full benefits of electrification throughout from Paris to Dijon.

The Laroche-Dijon section, formally inaugurated on December 15, 1949, had carried a growing proportion of electric goods trains from that time onwards. Electric working of passenger as well as goods services began officially on March 15, 1950, enabling some noteworthy accelerations to be introduced in the summer timetables of that year.

The winter timetables of 1950 were the first to be remodelled on the basis of electric traction throughout from Paris to Dijon. By this time experience had shown that the capacity of the 2-Do-2 locomotives enabled their maximum speed to be raised from 75 to 84 m.p.h., and higher averages to be scheduled with trains, of 800 instead of 600 *tonnes*. Further improvements have been made in the current summer timetables, as recorded in our May 25 issue.

Characteristics of the Line

The distance from Paris (Gare de Lyon) to Laroche is 96·3 miles by the shorter route. From Paris to Villeneuve-St. Georges (8·9 miles) there are six running lines. The main line continues with four tracks; *via* Brunoy and Combs-la-ville to Melun (27·4 miles from Paris); a loop with two running lines leaves the main route at Villeneuve to reach Melun *via* Juvisy and Corbeil. This loop connects with the electrified South-Western Region line to Orleans at Juvisy, where there is an important interchange of wagons between the two regions arising from the reorganisation of the South-Eastern Region goods station at Bercy to handle certain classes of goods traffic to and from South-Western Region stations. The Villeneuve-Juvisy-Melun loop was electrified at the same time as the main line.

Connections are made at Corbeil and Moret-les-Sablons with the line from Chasse *via* Nevers, which continues to handle much goods traffic between Paris and the Midi, although when electrification to Lyons is completed it is intended to divert these trains to the main line through Dijon.

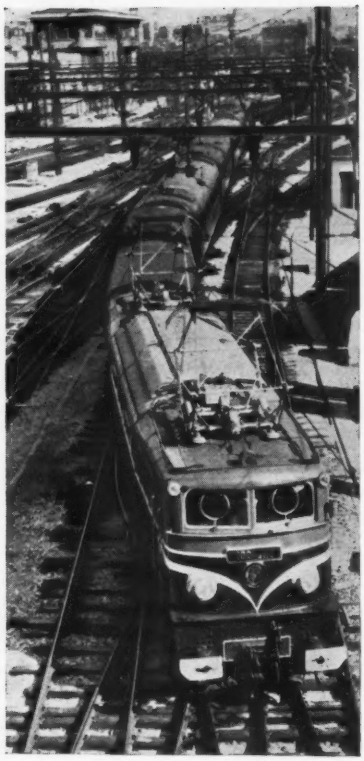
There are in effect four tracks from Melun to Montereau, although they follow different routes, two going *via* Fontainbleau and two *via* Héricy. Both routes are electrified, and are used by main-line trains, but that *via* Héricy is 1·2 miles longer. There are no gradients of note between Paris and Laroche except for 6½ miles at 1 in 200-250 against down trains from Montgeron to a point just beyond Combs-la-Ville.

The electrical installations for the Paris-Lyons route as a whole were described in our January 27, 1950, issue. Substations feeding the 1,500 V. d.c. contact line are at an average spacing of 9½ miles throughout the Paris-Laroche-Dijon section, and are equipped for the most part with two 4,000-kW. mercury-arc rectifier groups, although certain substations in the Paris suburban area have a third group of the same capacity as a standby.

Architecture of New Buildings

The substation buildings are of a standard basic design, varied in detail according to the amount of equipment each has to house. A functional treatment has been adopted, the buildings having sections of different heights governed by the nature of the apparatus in each part. Most of these buildings are of rough ashlar, found locally. The walls are strong enough to withstand bomb blast. Other buildings, notably houses for supervisory staff adjacent to substations, have been designed to conform with the local architecture of the localities through which the line passes.

New signalbox at Montereau



Express arriving at Gare de Lyon

A uniform style has been adopted for the three supervisory control centres from which the substation switchgear is operated remotely. These buildings, one of which is in Paris, accommodate both the control rooms and administrative offices. Each control room contains a semi-circular control panel about 100 ft. in length, supervised by a controller seated at a table at the centre of the semi-circle. A team of eminent French architects under the direction of Monsieur Paul Peirani was responsible for the design of all new buildings, which are of pleasing and modern appearance, and exhibit a unity of form which is appropriate to the component parts of a single great electrification undertaking.

Automatic Block Extended

The overhead line is of compound catenary construction with feeders and two contact wires, as described in our January 27, 1950, issue. Electrification was accompanied by extensive resignalling. On the Paris-Laroche section automatic block working has replaced the former manual block on both routes between Melun and Montereau and between Melun and Corbeil. Signals were resited and additional ones provided on existing automatic block sections to make the signalling suitable for speeds of 88 m.p.h.

Among the new boxes built in the course of this work, that at Montereau, in which relay interlocking is used exclusively, is of special interest as being the first example on the S.N.C.F. of remote control of unmanned "satellite" boxes; and the first application in France of the "piped light" type of illuminated diagram. In this system the lamps are mounted independently of the panel, to which their light is transmitted through a form of conduit. This has enabled the whole area controlled to be depicted on a diagram of comparatively small dimensions, the whole of which is clearly visible when seated at the control desk.

Junctions at Montereau

At Montereau the alternative routes from Melun rejoin, to continue towards Laroche as a four-track section, and by a system of junctions and flyovers east of the station are rearranged so as to bring together the two tracks for each direction of running. An important connecting line from the Eastern Region at Flamboin comes in at the Paris end of the station and has junctions with the Héricy and Fontainebleau routes. Montereau is the terminus of an outer suburban service from Paris.

Before resignalling, the Montereau area was controlled from five mechanical boxes distributed over a distance of about six miles. In the new installation all signals and points formerly worked by three of these boxes are operated from the new box, either directly or by remote control of the apparatus in one of its present two satellites. To complete the scheme a third satellite will replace the remaining two small mechanical boxes which control the junctions where the order of the tracks is rearranged east of Montereau. A coded impulse system requiring only four line wires is used for remote control of the satellite apparatus.

The relay interlocking panel controls 350 routes by means of 215 press-buttons. This has been achieved by arranging for each button to set up or cancel a route in each direction. For example, pressing a button may set up a route AB, or pulling it may set up BA. After each operation the button returns to a neutral position. When it is pressed or pulled again, the route AB or BA, if already set, is cancelled. Each button there fulfils four functions.

Paris Suburban Services

On the Paris-Laroche section the most important civil engineering work associated with electrification has been the rearrangement of tracks outside the Gare de Lyon, to avoid empty trains to and from the depot crossing the path of other services. The undertaking was

Interior of Montereau signalbox

described in our May 26, 1950 issue. These changes were essential for the increased services, particularly suburban, made possible by electrification. At the same time platforms were lengthened from an average of 328 yd. to 459 yd.

All South-Eastern Region Paris suburban services have been worked by electric traction since October, 1950. Pending delivery of motor coach and trailer sets, due in 1952, trains are composed of sets of four all-steel coaches each hauled by a Bo-Bo locomotive of one of the older series, with a remote driving compartment in the end coach. Two such sets are coupled for peak hour services, so that the trains operate with a locomotive at each end.

When the motor coach sets are in service, trains to Combs-la-Ville and Corbeil will run non-stop between Paris and Villeneuve. The existing suburban coach sets will be used on outer suburban services to Montereau.

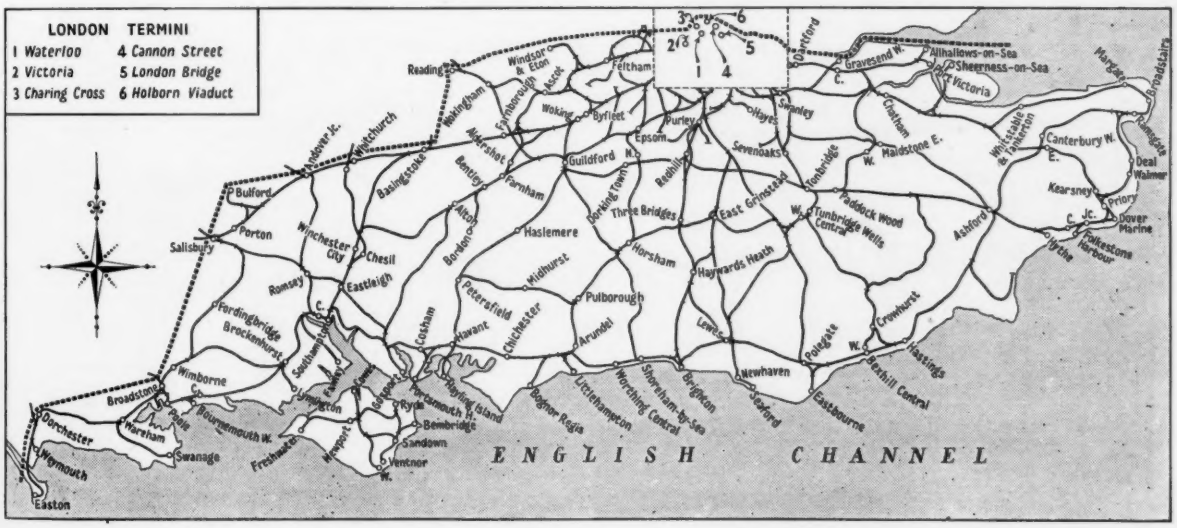
A major undertaking preceding electrification was the installation of electric heating in all rolling stock. Vehicles used in international trains had to be made adaptable for four voltages and two a.c. frequences of heating supply in accordance with the requirements of the International Union of Railways. Work began in April, 1947, and had been completed by October 1, 1947, by which time 1,221 vehicles had been dealt with in the carriage shops at Villeneuve St. Georges, Oullins (Lyons) and Marseilles or at various industrial establishments. Special equipment was installed at the three railway workshops for testing the heating equipment at the different voltages and frequencies specified. In all vehicles the internal temperature is maintained automatically at 66·2°F. by day and 69·8°F by night.

Training staff for electric working was a complex task, and was bound up with the other personnel problem arising from the smaller numbers of employees required at certain motive power depots under electrification. Every effort was made to avoid the men affected having to change their place of residence, and reductions in numbers were spread over several years, aided by the normal retirements. At Laroche, for example, the motive power staff was reduced progressively from 1,046 in 1946 to 650 by the time electrification was complete from Paris to Dijon.

Volunteers were invited for training in electric working and courses were instituted in 1947 for those selected. After lectures in electrical theory, candidates received practical training on electrified lines of the South-Western and Western Regions. Other courses had to be organised for supervisory grades and for engineering apprentices. The preparation of a great quantity of technical literature and instruction books was an essential background to these activities.

BARROW IRON & STEEL WORKS.—The Iron & Steel Corporation of Great Britain has agreed to take over the Barrow Iron & Steel Works from the Ministry of Supply. The United Steel Companies Limited will continue to manage the works as they have done for the Ministry in the past. The hoop mills are being modernised at a cost of £150,000 and a further £60,000 is being spent on an experimental pilot plant to try out a new process for the continuous casting of steel billets.

Recommended Boundary of the Southern Region Third-Rail System



The dotted line defines the area within which the report on "Electrification of Railways," submitted by a committee of which Mr. C. M. Cock was Chairman, recommends that extensions of the Southern Region third-rail system should be confined (see our March 23, April 6, and April 20 issues)

BRITISH STANDARD FOR ALTERNATING CURRENT FOR RAILWAY SIGNALLING.—It has been found desirable to revise the series of British Standards for relays for railway signalling, and the opportunity has been taken to combine in this standard the provisions of B.S. 520, which covers a.c. track relays; and B.S. 557 dealing with a.c. line relays, because many of the provisions of these two standards were similar. The new standard (B.S. 1745:1951) applies to a.c. line and track relays of the induction type intended for use in railway signalling circuits not exceeding 250 volts, and is applicable to relays with or without a local element. Copies may be obtained from the British Standards Institution, 24, Victoria Street, London, S.W.1. Price 2s.

INSTITUTE OF TRANSPORT EXAMINATION RESULTS.—The results of the Institute of Transport examinations held in May last have now been published. There was again a large entry, 1,245 candidates having sat, of whom some 630 secured a pass. Of the six candidates who secured honours, two were from air transport, one from railways, two from the road transport industry, and one from the Army (Movement Control). Additional examination centres were established this year at Canterbury, Kent; and Auckland, New Zealand, and arrangements were also made for one candidate to sit on board ship in the Mediterranean. The successful candidates included some men of over 50 years of age and one candidate of 59 years passed both parts of the graduateship examination.

The Paris-Laroche Electrification

(*See article on previous page*)

Lengthened main-line arrival platforms at Gare de Lyon, Paris

"Le Mistral" express leaving Gare de Lyon for Marseilles hauled by 2-D-2 locomotive

Standard Coaches Converted to Railcars

An experimental train built in Northern Ireland for service on the Belfast-Bangor line

Three-coach train built by the Ulster Transport Authority consisting of two converted railcars and a standard intermediate coach

VARIOUS economies are expected to result from the introduction by the Ulster Transport Authority after a series of trial runs of an experimental three-coach train on the Belfast-Bangor line. The immediate economy hoped for is a considerable reduction in fuel cost. Total seating accommodation is 16 first class and 250 standard class passengers.

The new three-coach train comprises two railcars with an ordinary compartment coach in the centre and it will be capable of a speed of 75 m.p.h. The power cars were converted from two standard 60-ft. centre corridor coaches, each of which has been reconstructed to enable a driving cab to be built at one end with a guard's compartment at the other.

Type of Power Unit

The train is powered by four A.C.V. underfloor engines of 125 b.h.p. Two of these are mounted on the underframes of each power car. They are fitted with fluid flywheels and Wilson pre-selector gearboxes. Final drive is housed in a special casing on the inner axles of each bogie and the drive is by bevel pinions through a sliding dog from a propeller shaft. Another feature is that, should one of the four engines fail, it can still operate on the remaining three engines. Steam heating for the experimental train is provided by a Vapor-Clarkson oil-fired steam generator which has been fitted in the guard's compartment of one of the converted railcars.

The leading and trailing railcars have separate driving cabs. Each has a first class compartment with separate platform entrances, accommodating eight passengers, the seats being Accles & Pollock adjustable reclining Dafita De Luxe type with hand-operated control for two positions; therefore each seat can be individually adjusted. Seats are trimmed with cut moquette of a vertical pattern in a combination of light and dark blue, brown, and fawn, while the seat backs are in soft trimming of beige centre and light blue, with surrounding borders of Vynide material to match the general colour scheme.

Interior Decoration

The floor is covered with detachable Wilton carpets in blue and fawn colours of relief patterns fitted in the gangway and between the seats. Side panels are similar to those in the standard compartment, being finished in Vinolite of walnut colour, with ceiling panels processed with Alhambrinal decorative panels, which incorporate motif designs within the two circular roof lamps. This compartment is separated from the standard accommodation by a glass partition fitted with a vestibule opening door.

Passenger Accommodation

The centre standard portion of the railcar accommodates 65 passengers in 26 transverse reversible seats, 13 on one side each seating three passengers and 13 on the opposite side each seating two passengers.

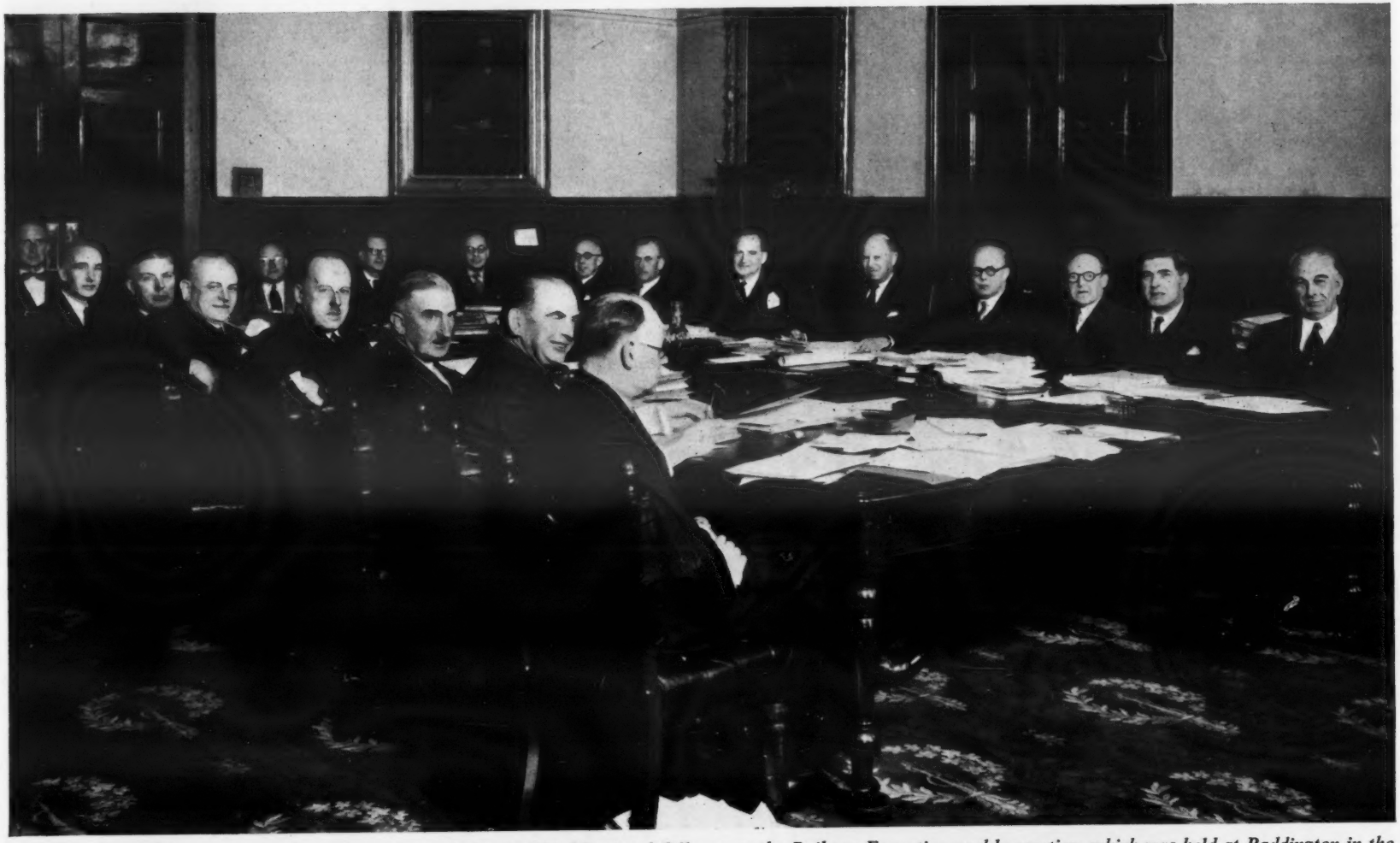
Seats have now been upholstered in moquette of a green chequered design and chrome fittings. The interior of the railcar is finished with Vinolite panelling representing walnut, while the roof is finished in white, with the floor in a pleasing brown.

The intermediate coach is of the standard 60-ft. compartment type, with ten compartments seating 12 passengers in each, or a total of 120. The total length of the train is 180 ft. and its weight in running order is approximately 90 tons. Hoffman roller-bearing axleboxes have been fitted to all the new vehicles.

Exterior finish is in dark Brunswick green with a narrow yellow band at the waistline. An attractive cream band on the panel below the cantrail is carried down to the waistline at the front of the driving cab at either end. The crest of the U.T.A. is applied to the bodyside of all three coaches and the coach numbers on the sides and front of the railcars are in gold. The conversion of the coaches was carried out in the Duncrue Street Workshops where the staff is now designing a six-coach train of 1,000 h.p

Interior of one of the U.T.A. first class and standard class railcars looking towards the guard's compartment in the rear

Railway Executive Meeting in the Board Room at Paddington

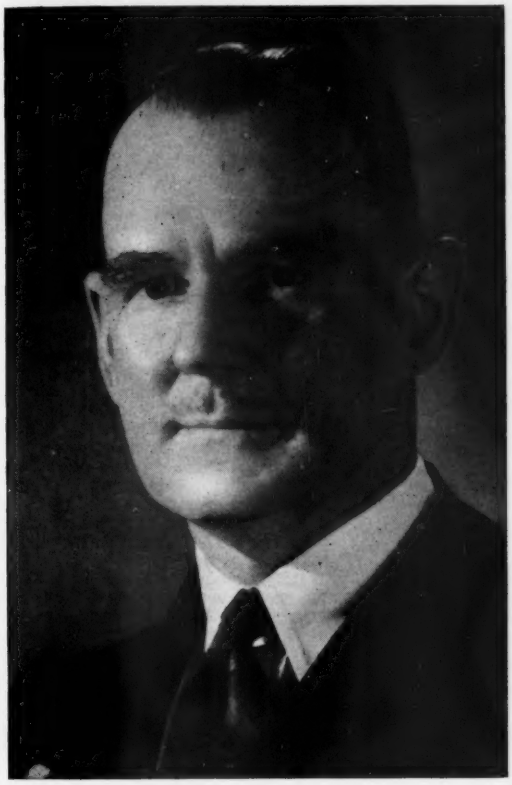


Members and Officers of the Railway Executive with the six Chief Regional Officers, at the Railway Executive weekly meeting, which was held at Paddington in the Board Room, on July 26 (*see paragraph on opposite page*)

RAILWAY NEWS SECTION

PERSONAL

Mr. F. W. Aickin, O.B.E., E.D., M.Inst.T., General Manager of the New Zealand Government Railways, who retired on superannuation at the end of July, when he had completed the statutory span of 40 years' service, is 56 years of age. He was for some years relieving officer in the Office of the District Traffic Manager at Wellington before transferring to the head office, where he has held executive and administrative positions in the accountancy, land and law branches of the Railways Department. When in 1931, the regulation of road transport in the Dominion was undertaken, Mr. Aickin, in addition to his legal work, was the principal adviser to the Railways Department on co-ordination, and he continued to act in that capacity for six years. He negotiated the purchase of a number of long-distance road passenger services, and was a member of a committee which drafted regulations for the licensing and control of road goods services. Immediately before his appointment as General Manager, he was the Department's Staff Superintendent & Chief Legal Adviser. He is a barrister and solicitor of the Supreme Court of New Zealand. He visited England in 1946 on contract business involving several millions of pounds. Mr. Aickin had been General Manager since 1948, and by reason of New Zealand's increasing goods traffic and shortage of staff one of his chief concerns during the three years has been the proposals for electrification of suburban and main trunk lines. For the same reason he has been responsible for the placing of orders for 5,000 wagons, 35 diesel railcars, 31 main-line diesel-electric, 34 diesel shunting, and 16 oil-fired steam locomotives in Great Britain in the past three years. He went overseas two years ago to study the latest developments in railway electrification in Australia, America, Britain and on the European Continent. Mr. Aickin served in the first and second World wars. He was mentioned in dispatches twice, and was made an O.B.E. for his services with the 8th Army. His unit, 16 N.Z. Railway Operating Company, which he commanded as Major, served in the Western Desert from 1940-43.



Mr. F. W. Aickin

General Manager, New Zealand Government Railways, 1948-51

Mr. K. J. Cook

Appointed Mechanical & Electrical Engineer, Eastern & North Eastern Regions

The Railway Executive held its weekly meeting on July 26 at Paddington in the Board Room, by invitation of Mr. K. W. C. Grand, Chief Regional Officer, Western Region. In the illustration on the opposite page are shown the following Members and Officers of the Railway Executive and Chief Regional Officers of British Railways:—

Reading right to left around the table (anti-clockwise): Messrs. J. W. Watkins, Chief Regional Officer, London Midland Region; C. K. Bird, Chief Regional Officer, Eastern Region; E. Coleby, Legal Adviser; E. G. Marsden, Secretary; John Elliot, Chairman; General Sir Daril G. Watson and Mr. R. A. Riddles, Members; Messrs. V. Radford, Chief Financial Officer; W. S. Cutler, Assistant to the Secretary; W. H. Mills, Assistant Secretary; G. T. Nicholson, Part-Time Member; J. C. L. Train, David Blee, V. M. Barrington-Ward, W. P. Allen, Members; K. W. C. Grand; T. F. Cameron, Chief Regional Officer, Scottish Region; H. A. Short, Chief Regional Officer, North Eastern Region; C. P. Hopkins, Chief Regional Officer, Southern Region.

Mr. K. J. Cook, O.B.E., M.I.Mech.E., M.I.Loco.E., Mechanical & Electrical Engineer, Western Region, Swindon, who, as recorded in our August 3 issue, has been appointed Mechanical & Electrical Engineer, Eastern & North Eastern Regions, Doncaster, was educated at King Edward's School, Bath, and entered the Great Western Railway locomotive works at Swindon as a premium apprentice in August, 1912. After military seryice during the first World war he entered the Chief Mechanical Engineer's Drawing Office and became Technical Inspector in the Locomotive Works, Swindon, in 1922, rising to be Locomotive Works Manager in 1937. His managership of these works extended throughout the second World war, during which he was responsible for a large production of direct war stores in the works for all branches of the fighting services. In 1947 he became Works Assistant to the Chief Mechanical Engineer, in 1948 Principal Assistant to the Chief Mechanical Engineer, and in January, 1950, he was appointed Mechanical & Electrical Engineer, Western Region, British Railways. Mr. Cook has taken a prominent part in

Dr. Fritz Wanner

Who is relinquishing his position as General Secretary, Swiss Federal Railways

Mr. H. Randle

Appointed Carriage & Wagon Engineer, London Midland Region

Mr. R. Neesham

Appointed District Engineer, Bradford, North Eastern Region

local affairs in Wiltshire. He is the Chairman of the North Wilts District Committee of the Regional Board of Industry and also Chairman of the Local Industrial Committee for Load-spreading, North East Wilts.

Dr. Fritz Wanner, who is relinquishing his position as General Secretary, Swiss Federal Railways, to become Commercial Manager of an electricity enterprise of the Canton Zurich, was born in Zurich on December 20, 1906. After passing through the cantonal school there, he studied law in the Universities of Berne, Berlin, and Zurich, where he obtained his degree of Doctor at Law. During the earlier part of his career he practised journalism, especially in the fields of transport and military matters. In 1929 he entered the service of the Swiss Federal Railways, and gained valuable practical experience during his work at various Swiss stations and at the Paris and London agencies of the Federal Railways. During his stay in London he had the opportunity to make useful contacts with the Railway Research Service. In 1931 he went to the General Secretary's Office as Legal Assistant and in 1939 was promoted Chef de Section and entrusted with the press service, which he organised and developed. Towards the end of 1940 he was made Assistant General Secretary, and in that capacity did much towards keeping the public informed on railway questions and transport problems in general. He was appointed General Secretary in 1944. Dr. Wanner has published a number of articles in the daily press and professional journals. In 1948 he was a member of a Swiss Railway Delegation to Great Britain which was organised by the British Transport Commission, and whose main purpose was to study the co-ordination of rail and road transport in the light of the organisations created under the B.T.C.

Mr. H. Randle, J.P., M.I.Mech.E., Carriage & Wagon Engineer, Western Region, Swindon, who, as recorded in our August 3 issue, has been appointed Carriage & Wagon Engineer, London Midland Region, Derby, joined the Great Western Railway as an apprentice in the Locomotive Works at Swindon. After experience in the Drawing Office he was appointed Assistant to the Works Manager of the Carriage & Wagon Department in 1930. In 1937 he became Assistant Works Manager of the Locomotive Works, and in 1946 Manager of the Carriage & Wagon Works. He was appointed Manager of the Locomotive Works in 1947 and Works Assistant to the Chief Mechanical Engineer in 1948; in January, 1950, he became Carriage & Wagon Engineer, Western Region. He served in both World wars.

Mr. R. Neesham, A.M.I.C.E., Assistant District Engineer, Newcastle, North

Mr. Charles W. Stokes

Public Relations Officer for Europe, Canadian Pacific Railway, 1945-51

Mr. G. K. Nield

Appointed Public Relations Officer for Europe, C.P.R.

Mr. J. Hancock

Appointed Assistant to the Commercial Superintendent (Passenger), North Eastern Region

Eastern Region, who has been appointed District Engineer, Bradford, began his career in 1923 at Newcastle under Mr. F. E. Harrison. After holding appointments in the North Eastern and Eastern Areas of the L.N.E.R., he joined the Underground Companies in 1930 as an assistant in the Permanent Way Department, where he was engaged on New Works on the Western and Northern extensions of the Piccadilly Line, the Metropolitan Line improvements and the extension of the Bakerloo Line. In 1938 he returned to the L.N.E.R. as Senior Assistant (General) in the Kings Cross District Office and in 1942 was appointed Acting Assistant District Engineer, Newcastle, and subsequently confirmed in this appointment in 1946. Between February, 1948, and September, 1950, Mr. Neesham was called on to act as District Engineer at Newcastle and Leeds (Stanningley).

Mr. Charles W. Stokes, F.R.G.S., F.R.E.S., who, as recorded in our July 27 issue, has retired as Public Relations Officer for Europe, Canadian Pacific Railway, entered the service of the Canadian Pacific in London, after some journalistic training, in 1907. Subsequently he resigned, and went to Canada. In 1912 he rejoined the company's service, in the Land & Irrigation Department, Calgary, Alberta. He was transferred to the Publicity Branch, Department of Natural Resources, and in 1917 went to Montreal as Assistant General Publicity Agent. In 1929 he was appointed Publicity Agent, London, and, in 1945, Public Relations Officer for Europe. Mr. Stokes was President of the Advertising Club of Montreal, 1927-29, and in 1929-30 of the American Association of Railway Advertising Agents. In 1945-46 he was Chairman of the Publicity Club of London. He is a Fellow of the Royal Geographical Society, Royal Empire Society, and the Incorporated Advertising Managers Association; and is the author of three books of travel.

Mr. G. K. Nield, Assistant Public Relations Officer for Europe, Canadian Pacific Railway, who, as recorded in our July 27 issue has been appointed Public Relations Officer for Europe, was born in London, and joined the European head office of the Canadian Pacific Railway in 1925 as a junior clerk in what was then known as the Publicity Department. He served in the Royal Engineers, Movement Control, during the war and was with the B.E.F. in 1940; he returned to North-West Europe again with 21 Army Group in 1944. Mr. Nield returned to the C.P.R. on demobilisation at the end of 1945 and was appointed Press Assistant to the European Public Relations Officer. In January, 1950, he was appointed Assistant Public Relations Officer. Mr. Nield has travelled extensively in Canada and returned from his most recent visit in May, this year.

Mr. J. Hancock, B.Com., A.M.Inst.T., Head of Rates & Fares Section, Commercial Superintendent's Office, North Eastern Region, York, who has been appointed Assistant to Commercial Superintendent (Passenger), York, was educated at Archbishop Holgate's Grammar School, York, and joined the L.N.E.R. in the Divisional Stores Superintendent's Office, Gateshead, in 1924. After a year's tour of Canada and the U.S.A. with a Sir Ernest Cassel travelling scholarship in 1931, he was appointed a traffic apprentice on the L.N.E.R., and subsequently occupied positions at Kings Cross, Middlesbrough, and York. During the 1939-45 war, he was commissioned in the R.E. (Movement Control), served in France and the Middle East as Deputy Assistant Director of Transportation with the rank of Major, and was mentioned in dispatches. On return to civil life, Mr. Hancock became successively Head of the Traffic Section, Goods Manager's Office, Glasgow, Goods Agent, Stockton, and Head of the Passenger Rates & Fares Section York.

Mr. P. W. Painter, Director & General Manager of Metropolitan-Vickers-G.R.S. Limited, is retiring on September 30.

G.N.R.(I) Appointments

The Great Northern Railway (Ireland) has announced the following appointments:—

Mr. R. W. Meredith, Acting Mechanical Engineer, Dundalk, as Mechanical Engineer. (A portrait and biography of Mr. Meredith appeared in our February 16 issue.)

Mr. T. J. Carton, District Superintendent, Dublin, has been designated District Traffic Manager, Dublin.

Funeral of Mr. John Ballantyne

The funeral of Mr. John Ballantyne, Chief Officer for Scotland, L.M.S.R., from 1932 to 41, who died on July 26, took place at Tinwald Churchyard, Dumfries, on July 30. In addition to family mourners, those present included:—

Messrs. T. H. Moffat, Deputy Chief Regional Officer, Scottish Region; A. Stewart, Assistant to Chief Regional Officer, Scottish Region; G. Mills, Divisional General Manager, L.N.E.R. (Southern Area), retired; J. Wilson, Solicitor (Scotland), L.M.S.R., retired; A. H. McMurdo, Divisional Engineer, Northern Division, L.M.S.R., retired; W. Crozier, Operating Manager, Northern Division, L.M.S.R., retired; R. Marshall, District Goods & Passenger Manager, Ayr, L.M.S.R., retired.

Mr. C. Stokes, Secretary, Thos. Firth & John Brown Limited, has been appointed a Director.

Power Jets (Research & Development) Limited has appointed Mr. G. C. R. Mathieson to be Senior Lecturer at the School of Gas Turbine Technology, Farnborough.

The Road Haulage Executive has announced that Mr. Alexander Scott, formerly Group Manager of the Scottish Parcels Group, has been promoted to the post of Divisional Traffic Officer for the Scottish Division.

Bakelite Limited has announced that Sir James Swinburne, who was Chairman of the company from its inception until 1948, has resigned his Directorship. In recognition of his services, he has been appointed Honorary President to the company. The following have been appointed to the board: Messrs. P. Huffman, N. H. Docker; and C. C. Last, and G. W. Hodds, Joint General Managers.

The Council of the Mansion House Association on Transport (Incorporated), announces that as an interim measure Mr. A. J. Malacrida, has accepted the Secretaryship of the Association with effect from October 1, to succeed Mr. D. G. Sofio, who will resign on September 30, before proceeding overseas.

Mr. H. E. Best, Secretary & Director of the Department of Tourist Activities & Immigration, New South Wales, and Mr. S. C. Howell, a Clerical Officer of the New South Wales Department of Railways and President of the Australasian Railway Officers Association, recently arrived in Great Britain. The object of their visit will be to recruit men for migration to Australia to undertake employment with the New South Wales transport services and other Government activities.

Mr. T. W. Ratcliffe, Works Accountant, Earlestown, London Midland Region, has been appointed Works Accountant, Gorton, Eastern Region.

Mr. J. B. Scott, General Sales Manager of the Plant Division, Crompton Parkinson Limited, has been appointed an Executive Director. He will also take up a new appointment as Assistant Sales Director (Sales) as from October 1.

Among those who arrived in Britain last week in the *Empress of Scotland* were Mr. C. E. Jefferson, Vice-President, Traffic, and Mr. K. M. Fetterly, Foreign Freight Traffic Manager, Canadian Pacific Railway. Mr. G. H. Baillie, Vice-President, Eastern Region, C.P.R., left Liverpool for Quebec in the *Empress of Scotland* on Tuesday, August 7.

Sir Edwin Plowden, Chief Planning Officer & Chairman of the Economic Planning Board, is to give up these appointments at the end of this year and intends to return to his Directorships with C. Tennant, Sons & Co. Ltd., and the British Aluminium Co. Ltd. He has been on unpaid leave of absence from the companies since taking up the post of Chief Planning Officer in 1947. Sir Norman Brook, Secretary of the Cabinet, will be transferred in November to the Treasury as a Second Secretary; he will carry out the duties at present falling to Sir Edwin Plowden as Chief Planning Officer.

London Transport Appointments

The London Transport Executive has announced the following appointments:—

Mr. J. W. Wicks, Assistant Engineer (Development—Buses & Coaches), to be Works Manager (Buses & Coaches).

Mr. J. Schofield, Works Engineer (Charlton), to be Works Manager (Trams & Trolleybuses).

Mr. N. H. Charles, Planning & Methods Engineer (Buses & Coaches), to be Planning & Methods Engineer (Road Services —Works).

Mr. W. D. D. Brewer, to be an Officer of the Executive, with the title of Progress & Materials Superintendent (Buses & Coaches).

London Midland Region Appointments

The following staff changes are announced by the London Midland Region:—

Mr. H. E. Kemp, Executive Officer (Wagons), Railway Executive Headquarters, to be Wagon Works Manager, Earlestown.

Mr. W. F. Beatty, Works Maintenance Assistant, Civil Engineer's Department, Euston, to be Works Construction Assistant, Civil Engineer's Department, Euston.

Mr. C. H. Jones, Assistant to Bookkeeper, Accountant's Department, Euston, to be Assistant to Accountant, Euston.

Mr. L. M. Sayers, District Operating Superintendent, Hull, North Eastern Region, to be District Operating Superintendent, Nottingham.

Mr. R. L. E. Lawrence, District Operating Superintendent, Liverpool (C.L.), to be District Operating Superintendent, Derby.

Mr. A. S. Mead, Assistant to District Passenger Superintendent, Manchester, to be Assistant District Passenger Superintendent, Liverpool.

British Transport Commission Statistics (Period No. 6)

Summary of the principal statistics for the four-week period ending June 17

STAFF

—	B.T.C. Head Office	British Railways	London Transport	British Road Services (Road Haulage)	Road Passenger (Provincial & Scottish)	Hotels & Catering	Ships & Marine	Inland Waterways	Docks, Harbours, Wharves	Railway Clearing House	Commercial Advertisement	Legal	Films	Total
Number ...	252	599,650	99,280	78,543	60,634	18,612	6,446	4,892	20,066	644	204	294	35	889,552
Inc. or dec.	−3	+148	+15	+141	+544	+284	−33	+27	+10	−4	—	+1	−3	+1,127

BRITISH TRANSPORT COMMISSION TRAFFIC RECEIPTS

—	Four weeks (Period No. 6)		Aggregate for 24 weeks	
	1951	1950	1951	1950
	£000	£000	£000	£000
British Railways—				
Passengers	8,620	9,432	42,470	44,219
Parcels, etc., by passenger train	2,592	2,441	14,752	13,267
Merchandise	8,101	6,818	44,246	38,246
Minerals	2,946	2,591	16,242	14,418
Coal & coke	7,491	6,123	41,515	33,908
Livestock	78	85	458	544
	29,828	27,490	159,683	144,602
British Railways—				
Delivery & other road services	832	766	4,643	4,152
Ships and Vessels	1,045	965	4,242	3,862
London Transport—				
Railways	1,234	1,082	7,322	6,635
Buses & coaches	2,725	2,498	14,903	14,121
Trams & trolleybuses	770	828	4,514	4,909
	4,729	4,408	26,739	25,665
British Road Services—				
Freight charges, etc.	5,809	4,655	34,360	26,789
Road Passenger Transport	3,423	3,195	17,754	16,013
Docks, Harbours & Wharves ...	1,100	942	5,841	5,255
Inland Waterways	151	132	788	713
Hotels & Catering	1,311	1,154	6,937	6,326

LONDON TRANSPORT

—	Passenger journeys	Inc. or dec. per cent. over 1950	Car miles	Inc. or dec. per cent. over 1950
	000		000	
Railways	48,696	+2·3	18,464	+4·3
Buses & coaches	232,892	+7·1	26,205	+5·9
Trams & trolleybuses	76,908	−14·5	7,566	−12·7
Total	358,496	+1·0	52,235	+2·5

INLAND WATERWAYS

Tonnage of traffic and ton miles

—	Tonnage	Inc. or dec. per cent. over 1950	Ton miles	Inc. or dec. per cent. over 1950
	000		000	
Coal, coke patent fuel & peat	479	+6·0	7,232	+6·4
Liquids in bulk	149	+9·9	3,403	+0·1
General merchandise	319	+0·3	5,154	−5·3
Total	947	+4·6	15,789	+1·0

BRITISH RAILWAYS

Rolling Stock Position

—	Operating stock	Number under repair	Available operating stock	Serviceable stock in 1950
Locomotives	19,405	3,217	15,637	15,881
Coaching vehicles	57,856	5,204	52,652	52,674
Freight wagons	1,109,735	81,688	1,028,047	1,008,412

BRITISH RAILWAYS

Passenger Journeys (Month of April, 1951)

Full fares	Monthly returns	Excursions, cheap day, etc.	Other descriptions	Workmen	Season tickets	Total	Inc. or dec. per cent. over 1950
5,673,000	8,410,000	17,620,000	3,601,000	18,883,000	31,076,000	85,263,000	+2·3

BRITISH RAILWAYS

Freight Tonnage Originating and Estimated Ton-Miles (Period No. 6)

—	Minerals	Merchandise	Coal & coke	Livestock	Total	Inc. or dec. per cent. over 1950
	000	000	000	000	000	
Tons originating ...	4,739	4,216	13,559	49	22,563	+7·9
Ton-miles	411,072	554,176*	854,615	—	1,819,863	+11·3

* Includes livestock

BRITISH RAILWAYS (Period No. 6)

—	Total steam coaching train-miles	Total electric coaching train-miles	Total freight train-miles	Freight train-miles per train engine-hour	Net ton-miles per total engine-hour	Locomotive coal consumption	
						Total tons	Lb. per engine-mile
1951	14,530,000	3,784,000	11,135,000	8·7	623	1,016,000	60·0
1950	15,481,000	3,792,000	10,533,000	8·8	590	1,003,000	59·1

Ministry of Transport Accident Report

Court Sart Farm Crossing, Western Region, British Railways: October 9, 1950

Colonel D. McMullen, Inspecting Officer of Railways, Ministry of Transport, inquired into the accident which occurred at 3.11 p.m. on October 9, 1950, at Court Sart Farm occupation crossing, between Briton Ferry and Neath, when the 2.10 p.m. passenger train, Cardiff to Swansea, consisting of a 2-6-2 tank engine running chimney first, and four bogie coaches travelling at 40 m.p.h., struck the trailer frame of a Scammell low loader lorry; the driver had misjudged the width of the far side gate and stopped with the rear end on the down line. The trailing portion was separated from the power unit. The engine pony truck twisted round, destroying sleepers and spreading the gauge, and the whole train became derailed; the engine came to rest on its side at the bottom of an embankment. There was no telescoping, but all the coaches were damaged. The engine driver, fireman, lorry driver, and mate were removed to hospital, but were discharged within ten days. Four of the 28 passengers and the guard received slight injuries. The weather was fine and clear.

The crossing gives access from the main Cardiff-Neath road to Court Sart Farm, on the down side, and to Neath engine shed and canteen. The former Great Western Railway was given full rights of way over it in 1875. The gates are set back from the lines and are 9 ft. 3 in. wide (up) and 10 ft. 3 in. wide (down) with warning notices and one pointing out that the crossing is not dedicated to the public. The view fom the left side of an engine is 150 yd. but the down side safety bay and gate cannot be seen on account of a bank and some low shrubs. They cannot be seen at all on account of curvature from the right hand (the engine had right-hand drive). There are whistle boards 230 yd. on each side of the crossing. There is a two-way telephone, provided during the 1914-18 War, to Court Sart Junction box, some 530 yd. away, and the following instructions appear in the appendix to the working timetable:—

"A telephone, enclosed in a locked box, is fixed to a post on the up side of the line near the gate next to Court Sart Farm. The occupier of Court Sart Farm is supplied with a key of the box, and when it is necessary for farm vehicles containing heavy machinery and farm implements to cross the line, the person in charge will communicate with the Court Sart Junction signalman by means of the telephone and obtain the signalman's permission before passing over the line. A record must be kept by the signalman of the time such vehicles cross the lines."

Evidence

The whistle was sounded as the train approached. The fireman, on finishing firing, looked through his spectacle glass and saw the end of the lorry not far ahead. He told the driver, who failed to hear, and the collision occurred before he could repeat what he said. The fireman was trapped when the engine turned over, but the others and staff travelling in the train promptly protected the lines. The junction signalman saw the train stop, and, thinking something must be wrong, sent "obstruction danger." An approaching express was stopped by the Neath engine shed box signals.

The lorry driver had had ample experience with this class of vehicle, but had not used this crossing, and did not know of the telephone. He said that he stopped short of the up gate, and, with his mate, walked over to make sure he could turn on the far side. They had to bring back a bulldozer, of which the mate was driver. Both gates were then open. The driver drove through, and remembered looking along the line and seeing no train, but nothing more until recovering consciousness in hospital. His mate did not know of the telephone and said they both paced the gateways to make sure the vehicles could pass them. Seeing both lines to be clear, he had beckoned the driver over, who misjudged the down gateway and had to stop to avoid hitting the gatepost. He himself did not see the train, but heard a whistle. The tenant of the farm said he had used the crossing quite frequently, always with great care, since his tenancy commenced on March 31, 1950, but had not met the responsible stationmaster and did not know about any telephone.

The stationmaster at Briton Ferry said he visited the crossing frequently. The previous occupant used the telephone. He knew there had been a sale at the farm, and had made special arrangements for the crossing to be manned that day, but he was unaware that the farm had changed hands and that lorries and machinery were again being taken over.

The representative of the Earl of Jersey, and of the leaseholders of the land, said that Neath Corporation previously had the right to tip refuse, but ceased doing that after one of their lorries was damaged at the crossing in 1948. He had given the South Wales Gas Board right of entry to the land to lay a main, and had given them permission to use lorries over the crossing, although he somewhat qualified that remark later. The Welsh Board of Health had a scheme for a housing estate entailing demolition of all the farm buildings. One access to this would be over the crossing. He did not think the plan had been approved, but it was proposed to sell the land absolutely to the Neath Corporation.

The County Planning Officer confirmed the development plan, which probably would include a school and playing fields. Planning consent had been given, and the question of land purchase was before the Board. The plan incorporated a new entrance road and bridge over the line not far from the junction. He thought the crossing would not be used as access to the estate except possibly for heavy earthwork machinery during construction.

The railway District Engineer expressed doubt as to whether the bridge mentioned was a physical possibility.

Inspecting Officer's Conclusions

The engine crew were in no way responsible, and Colonel McMullen is not inclined to attach much blame to the lorry driver, whose only fault was to misjudge the width of a gateway. He knew of no telephone. Had it been used, the accident still might have occurred, because, unless he explained that the vehicle was of an unusual type, the signalman might have allowed it to cross as there was ample time for a normal one to do so. The vehicle is of such length as to be outside the scope of the Motor Vehicles (Construction & Use) Special Regulations, 1947, and should be operated under the Motor Vehicles (Authorisation of Special Types) General Order, 1941. The owners therefore would have been prudent to inform the stationmaster of their intention to move it over, and had they done so, no doubt special arrangement would have been made as in the case of the sale.

Remarks and Recommendations

This is another case of derailment caused by collision with a motor vehicle although there was a telephone at the crossing and the gates were set back to form safety bays. Even regular road users were unaware of the telephone, and the bays were insufficient to take this lorry. It is important that supervisory railway staff should keep themselves informed of changes in ownership of property and ensure that regular users are aware of any special hazards at unguarded crossings and of the safeguards provided by the railway. There remain always, however, casual users, and Colonel McMullen recommends that any safeguard such as a telephone should be conspicuously advertised on both sides of the crossing.

The dimensions of gates and bays are adequate for any ordinary vehicle; it is out of the question for this and many other similar crossings to be redesigned to suit unrestricted use of all abnormal vehicles, generally required to operate under the 1941 order quoted, according to which the highway and bridge authorities and police have in certain circumstances to be notified in advance of their movements over a public highway. There is no similar requirement for level crossings, but the railway authorities have long recognised the need for such notifications, and stationmasters are instructed to ask for them from local users of certain types of crossing. It would seem desirable for this to be obligatory, in view of the general use of heavy, large, or awkward vehicles.

There is no doubt that if the plan for a housing estate materialises, and unless very positive action is taken to prevent it, this crossing will soon assume a public character even if the bridge is constructed.

The Town & Country Planning (General Development) Order, 1948, lays down that "where it appears to the local authority that the development is likely to create or attract traffic which will result in a material increase in the volume of traffic . . . using a level crossing over a railway" the authority should consult with the Minister of Transport. Although planning consent was given in this case before the issue of the Order, Colonel McMullen thinks that the action indicated therein still very desirable.

RECORD NUMBER OF VISITORS TO BRITAIN.—An increase of 8 per cent. as compared with last year in the number of visitors from overseas is announced by the British Travel & Holidays Association for the first six months of 1951. Figures released show that in the half-year an estimated total of 281,952 visitors arrived and as tourist traffic is heavier during the latter half of the year the Association is now confident that the number for the full year will reach the target of 700,000. Such a volume of traffic would break all records.

Parliamentary Notes

Transport Debate in House of Commons

Opposition plans for decentralisation and reorganisation of nationalised transport

In the House of Commons on July 31 Captain Peter Thorneycroft (Monmouth—C.) opened the debate on transport. Referring to the dock industry and the work of the Docks Executive, he said that the Conservative Party could not see that the latter served any useful purpose to carve out and centralise that one particular function of transport, and intended to wind it up at the first opportunity. The Road Passenger Executive was a purely frivolous assembly. It cost £25,000 last year, four times what it cost in 1949. Fortunately, none of its schemes had been accepted. It was an acknowledged policy of the B.T.C. to put up bus fares as soon as it could lay hands on the buses. The Road Passenger Executive must follow the Docks Executive into the limbo of forgotten things. The Hotels Executive had turned a net deficit of £47,000 in 1949 into a net deficit of £190,000 in 1950; it cost £166,000. The Conservative Party would abolish it also.

Regarding the railway traffic embargoes in the early months of this year, Captain Thorneycroft referred to the dangers of the coming winter, the substantial losses which had been incurred by the B.T.C., and the whole question of the collapse of the road-and-rail charges scheme. The real tragedy of the Commission was that it was refusing goods and losing money at the same time. He drew attention also to embargoes this summer and said that if the railways got into that condition in mid-summer they must consider the possible situation next winter. The key to the problem was manpower; he asked if the maximum use was being made of the men who were already in the railway industry. He did not think anybody could ask for overall exemption of all railwaymen from call-up, but if the presence of certain key men in vital spots next winter would preclude serious delays, it would be a major blunder if something were not done soon. Captain Thorneycroft drew attention to the importation of American coal before the winter transport difficulties began.

Increase in B.T.C. Charges

On the question of finance, Captain Thorneycroft said the B.T.C. now had an accumulated loss of £40 million. Lord Hurcomb's solution to stop that continuing drain was for British Railways to be able to adjust their charges as quickly as prices rose round them. He had increased the freight charges by 28 per cent., and the passenger fares were going up. There was an enquiry going on; the London fares were going up and, in regard to the road industry, he had had a free market there. Without let or hindrance he had put on increases of 60 and 100 per cent., but he always cried "Faster! faster!" The whole basis of the Transport Act had now broken down and had been abandoned. Under the Act, the road-rail charges scheme was to be drawn up within two years. There were many arguments about it, but nothing happened and, at the end of two years, a further two years were granted. The charges scheme would never see the light of day.

British Road Services, continued Captain Thorneycroft, took over profitable firms against the wishes of the men running them with profit to themselves and service to the community. It turned those businesses into a vast concern which last year lost £1 million of public money before it had paid one penny of interest on the assets it had filched. The basis of that acquisition was that a charges scheme should be put up; but there was to be no charges scheme. Lord Hurcomb and the B.T.C. were claiming in the Report for 1950 that they should recoup those losses by an unlimited right to raise charges against the consumer. To be able to discriminate between one business or industry and another was a flagrant abuse of monopoly power.

Opposition Transport Policy

The Opposition intended, to start with, to abolish the ridiculous restriction of a 25-mile limit upon the private road haulier. They would give an opportunity to those who had been driven out of the business to come back into it. They proposed to re-organise publicly-owned transport, railways, road haulage, and canals in regional boards of a size at which there was some possibility of finding some body big enough to run them. They proposed also to wind up the functional executives because they could see no very useful purpose which they would serve. In that more competitive atmosphere, they proposed to give the railway companies a much greater degree of flexibility and freedom.

The Minister might disagree with that policy, but there was one thing on which Members on all sides ought to agree: the present policy had failed. It had been abandoned by the very men who put it up. It was for the Minister either to produce a policy of his own or to give the Opposition a chance.

Mr. Percy Morris (West Swansea—Lab.) said the railway deficit in 1950 might have been avoided had the adjustment in charges eventually made been authorised a little earlier. The physical resources of the Railway Executive were so limited, due to the neglect of the war years and to difficulties of today, that it was absolutely impossible, unless the Government came to their aid, to cope with the increasing traffic that was the result of full employment.

The Commission had suggested a superannuation scheme for the salaried grades, which, as now framed, was quite unacceptable. It imposed too great a penalty upon the employees and made them wonder why facilities comparable to those given by the Coal Board and other public utilities were not available to transport employees also. Much of the trouble on the railways was due to the reluctance to give railwaymen proper wages. The B.T.C. Report showed that they came at the end of the queue on nearly every occasion; railwaymen were disgruntled and disappointed.

Mr. David Renton (Huntingdon—Lib. Nat.-Con.) suggested that the railways would lose less money if they charged less for passenger services. The average train could carry about 1,000 passengers and it was better to have it full, or nearly full, with people paying, say, 10s. for the journey, than only two-thirds full with people paying 12s. 6d. Accountants would say that it could not be done; but many experts on railway management held a completely different view from that taken by the accountants to the Commission. As to the Road Haulage Executive, if their vehicles had been left in the hands of private enterprise, instead of having a deficit of over £1 million, they might very well have had a net profit of anything from £3 to £6 million, after making a contribution to central charges.

Mr. Hector Hughes (North Aberdeen—Lab.) said there were many criticisms from Scotland of the transport system, such as the freight rates, and distribution of commodities to the London markets. Costs could be rectified by flat rates all over Britain; perhaps by an extension of the "taper" system and certainly by equal treatment for all parts of the island. He advocated electrification of railways in Scotland.

Mr. Frank McLeavy (East Bradford—Lab.) said the railways should be regarded as a semi-social service, and could never pay their way. A subsidy, provided it was applied with caution, was the best method of dealing with the position arising from road competition.

Wastage among Railwaymen

Mr. P. H. Collick (Birkenhead—Lab.) said that during the last year 4,000 locomotive men were called up and the Minister of Transport stood idly by and allowed this. Each would have been reserved in the event of an emergency. He was astonished that, in the light of the facts and of the representations made to the Minister by the Railway Executive, the Government had not made a decision on that vital matter. Few conscripts returned to the railway service from the forces, because of the unattractive conditions on the railways. Unless the Minister dealt with the financial structure so as to improve conditions and remuneration, the drift from the railways was bound to continue. If they could create a superannuation scheme worthy of its name for skilled men, it would help.

Mr. R. J. G. Boothby (East Aberdeenshire—C.) criticised the punctuality of passenger trains, cleanliness of locomotives and coaching stock, and apathy and lack of discipline among railwaymen.

Mr. W. T. Procter (Eccles—Lab.) said that the Cabinet should give most careful consideration to the question of military service. They were wasting their resources in training railwaymen for any other job when, in an emergency, they would instantly want them for the railways.

Squadron Leader A. E. Cooper (South Ilford—C.) described as thoroughly disgraceful the standards of the hotels, the refreshment rooms and dining cars, and such other personal services as the toilet accommodation in stations and trains.

Mr. William Keenan (Kirkdale, Liverpool—Lab.) said that there should be assistance from the state. They should reconsider the question of the "C" licence holders, so that they could have that integration of road and rail envisaged by the Transport Act.

Proposed Inquiry into Railways

Mr. Reader Harris (Heston & Isleworth—C.) said he would like to see a completely independent body like a Royal Commission

carefully examining the whole working of the Transport Commission and the Railway and Road Haulage Executives. A matter for examination was the accountability of the B.T.C. to Parliament.

Mr. G. A. Pargiter (Southall—Lab.) advocated dieselisation of branch lines, on the grounds of manpower economies thereby effected.

Viscount Hinchingbrooke (South Dorset—C.) said that the Conservative Party thought that there was a case for a clearly defined subsidy for the railways associated with defence and strategy.

Mr. Alfred Barnes (Minister of Transport) said that the Government shared the concern of Members at the grave shortage of certain key railwaymen, which was likely to affect operation winter. It had been a developing problem and had become acute over recent months. The Railway Executive and the unions had been discussing continuously, and the Government came in on the matter of deferment.

Once deferment was decided on for any particular grade of labour, similar arguments could be advanced by many other industries. The Government were fully alive to the need of maintaining the transport services, particularly the railways, and while no decision had been made at the present moment, a proposal was being examined. He could not in any way indicate how it would emerge from the examination of all the Government Departments concerned. The necessity of keeping industrial life at its fullest capacity was being examined to ascertain whether they could meet the military purpose of the call-up of personnel and at the same time marry it to the current railway needs of the time.

In the key footplate grades in March, 1950, there were 94,813 men. By December the figure had been reduced to 93,360 and in March of this year it had declined to 85,000. It was expected that by the middle of this year it would reach 88,605. In the case of guards, signalmen, and shunters, at the same time it was 63,000 and had now declined to 50,595. They were bound to remember the severe difficulty they had at the end of last winter and the problem of meeting a similar difficulty in the forthcoming winter.

B.T.C. Deficit

Mr. Barnes pointed out that the B.T.C. in 1950 made a surplus of some £40 million without the central charges. The latter amounted to £54 million, which turned that surplus apparently into a deficit of £14 million. The central charges included interest on Transport Stock of £35 million, and, on their other borrowings, of £10 million; this made an interest payment of £45 million, out of the £54·1 million of the central charges. In addition, there was the railway freight repayment fund, which was a payment to coal and agriculture amounting to £3·7 million, yet both coal and agriculture were today more prosperous industries than the railways. If the increase of 16⅔ per cent. on freight charges which came into operation towards the end of the first quarter of 1950 had been in operation at the beginning of the year when the Commission applied for it, the accounts of the Commission would have been in balance. The loss of nearly £40 million had accumulated over three years. The turnover of B.T.C. services during those three years was £1,500 million. Over that period, if for every 100 pence paid by passengers or traders for the services which they had received from the Commission, whether rail, road or anything else, the charge had been 103 pence, the loss of £40 million would have been wiped out.

Turning to the four alternatives which were advanced from time to time to deal with the problem, Mr. Barnes said the first was that the State should meet these losses with a subsidy. That was followed by the view that the strategic value of the railways should be assessed and a payment made for defence purposes. Another proposal was that the interest rate should be cut or abolished, which would mean the State dishonouring its guarantee. Then there was the further proposal that there should be a drastic curtailment of "C" licence transport. Whatever might be the ultimate decision of Parliament, he did not consider that any of those solutions were correct at the moment.

The B.T.C. Report, he continued, pointed out the time lag between the rise in costs and the time when an increase in charges became operative. The new passenger charges scheme was submitted to the Transport Tribunal in April, but the first hearing by the Transport Tribunal would not take place until October. The freight charges scheme had been delayed beyond August 5 to enable discussions to take place between coastal shipping interests and the B.T.C., but the scheme would not be delayed beyond the end of this year.

Road Transport Area Schemes

Mr. Barnes expressed disappointment that the road passenger Area Schemes had progressed so slowly; although there had been delay in the schemes, the Commission had been steadily acquiring road passenger undertakings and today had something like 14,000 road passenger vehicles under their direct control. In addition, the B.T.C. had large shareholding interests, largely taken over with the railway companies, in private road passenger undertakings, including the British Electric Traction Company, which had been most violent in its opposition to the area transport scheme. Probably today the Commission either owned or had a share interest in the value of something like 70 per cent. of the road passenger interests in this country. It was preparing schemes for the North-East area, for East Anglia, and for the South-West, but they were making slow progress, and would make slow progress until there was a larger body of public opinion locally willing to co-operate. He sincerely trusted that before long they would have a change of opinion in that direction, because many local authorities were experiencing financial difficulty in running their own undertakings.

In conclusion Mr. Barnes said he believed that if they were wise enough not to abolish the Transport Tribunal machinery, but to see that it worked much more rapidly, as any other business worked more rapidly, they would have cleared the way for national transport to prove that it was successful and desirable.

The debate was concluded.

Questions in Parliament

Railway Executive Headquarters

Wing Commander E. E. Bullus (North Wembley, C.) on August 2 asked the Minister of Transport what sum was authorised for alterations to the Railway Executive Headquarters at 222, Marylebone Road.

Mr. Alfred Barnes stated in a written answer: In April, 1947, it was proposed to convert the former Great Central Hotel into a hostel for train crews, at an estimated cost of £202,900; but early in 1948 it was decided to convert it into offices for the then newly formed Railway and Road Transport Executives; the Hotels Executive is also housed in the same building. The total amount of money authorised on the two projects since their inception is £215,880.

South West Area Scheme

Mr. S. Wingfield Digby (West Dorset—C.) on July 30 asked the Minister of Transport how soon he expected to receive from the B.T.C. its draft area road transport scheme for the South West.

Mr. Alfred Barnes stated in a written answer: The Commission is unable to say when this scheme is likely to be submitted.

Sudan Railway Strike

Colonel A. D. Dodds-Parker (Banbury—C.) on July 30 asked the Secretary of State for Foreign Affairs how far external funds caused the recent railway and police strikes in the Sudan; and what evidence there was of the source of those funds.

Mr. Ernest Davies (Parliamentary Under Secretary of State for Foreign Affairs), in a written answer, stated: There is no evidence that external funds were responsible.

Staff & Labour Matters

Industrial Disputes Order, 1951

The Conditions of Employment & National Arbitration Order, commonly known as Order 1305, which was a wartime Order making strikes and lockouts illegal, will be revoked on August 14 and a new Order called the Industrial Disputes Order, 1951 (No. 1376), will supersede it.

Disputes can only be reported to the Minister of Labour by employers' organisations, employers themselves, or trade unions. Such matters as the employment or non-employment of a worker and claims for reinstatement are excluded from the Order. The new machinery cannot be used for appealing against an award under the Industrial Courts Act or settlements reached through the voluntary machinery.

Where a dispute has been referred to the Minister and he is of the view that a suitable procedure for negotiation or arbitration for settling the dispute exists and that all practical steps for settling it have not been exhausted, the Minister can refer the dispute for settlement to that procedure.

Disputes not so dealt with must be referred by the Minister within fourteen days to the Industrial Disputes Tribunal. The Tribunal comprises three appointed members, one of whom is Chairman, and two others represent employers and workers respectively. The award of the Tribunal is final and binding, until varied by agreement between the parties, or by a subsequent award of the Tribunal.

The Minister can defer reference of a dispute to the Tribunal if either of the parties takes action likely to lead to a stoppage of work, or in a substantial breach of agreement between the parties. Dealing with the omisssion of provisions in the new Order to prohibit strikes and lockouts, Mr. Robens stated in the House of Commons that experience had shown that the enforcement of penal sanctions gave rise to extreme difficulties, and the time had arrived when Order 1305 needed to be reviewed. Where an employer is not observing recognised terms and conditions of employment, the Tribunal by its award may require observance of these.

Contracts & Tenders

A contract has been placed with the North British Locomotive Co. Ltd. by the South African Railways for 25 "S1" class 0-8-0 engines and tenders. The locomotives will have 23¼-in. dia. × 25-in. stroke cylinders, 180 lb. per sq. in. boiler pressure, and a tractive effort of 38,000 lb. at 75 per cent. boiler pressure.

The tenders will be four-wheel double-bogie type, with capacity for 11 tons of coal and 6,000 gal. of water. The engines and tenders will be dismantled and packed for shipment as approved by the railway authorities.

The Crown Agents for the Colonies have recently placed the following contracts for the Malayan Railway:—

Birmingham Railway Carriage & Wagon Co. Ltd.: 255 four-wheel covered goods wagons.

Cravens Railway Carriage & Wagon Co. Ltd.: 50 bogie high-side wagons.

Gloucester Railway Carriage & Wagon Co. Ltd.: 100 bogie covered goods wagons.

The Southern Region of British Railways has recently placed a contract with Hackbridge & Hewittic Electric Co. Ltd. for glass bulb rectifier equipment for 29 substations.

The Government of New South Wales is calling for tenders for suburban electric motor and trailer coaches to Department of Railways specification No. 2227. Alternative tenders are required for a total of 300 or 500 coaches, and tenders must reach the Agent General for New South Wales (Engineer's Branch), London, W.C.2, not later than 12 noon, December 19.

Tenders are also being invited for 2,750 steel underframes for 18 ft. wagons to Department of Railways specification No. 2228. The closing date is 12 noon, September 5, at the Office of the Agent General for New South Wales (Engineer's Branch), London, W.C.2.

Further reference is made to these tenders under Official Notices on page 167 of this issue.

It was recently stated in the Board of Trade special register information service that the Agent-General for New South Wales has reported a call for tenders (No. 2224) by the Government of New South Wales for the manufacture, supply and delivery of 200 locomotive tenders of the following capacity: water 5,000 gal. coal, 12 tons. Copies of the tender documents are obtainable from the Agent-General for New South Wales (Engineer's Branch), 56/7, Strand, London, W.C.2, and tenders should reach the Agent-General for New South Wales at their address not later than 12 noon Wednesday, September 26.

A report from Melbourne shown in the Board of Trade Special Register Information Service states that the South Australian Railways have issued a call for tenders (No. 4591) for the supply of:—

Forty 50-ton bogie hopper wagons, 5 ft. 3 in. gauge, Class "HS."

Twenty 40-ton bogie hopper wagons, 5 ft. 3 in. gauge, Class "H."

Tenders should reach the Secretary, Railway Commissioner's Office, Adelaide, before noon on August 28. A copy of the tender documents and drawings is available for inspection by representatives of United Kingdom manufacturers at the Commercial Relations & Exports Department (Industries Branch), Board of Trade, Millbank, S.W.1. Additional copies of the tender documents and drawings are available at the Office of the Agent-General for South Australia, 499, Oxford Street, London, W.1.

A further report from Melbourne states that the Victorian Government Railways have issued a call for tenders (No. 58929) for the supply and delivery of six 70 ft. engine turntables (Twin span electrically operated). Tenders should reach the Secretary for the Victorian Railways, Melbourne, before 11 a.m. on September 12.

A copy of the tender documents is available for inspection by representatives of United Kingdom manufacturers at the Commercial Relations & Exports Department (Industries Branch), Board of Trade, Millbank, S.W.1. A second copy is available for loan to United Kingdom manufacturers in order of written application to the Department; reference CRE(IB) 66846/51 should be quoted. Copies are also obtainable from the Agent-General for Victoria, Victoria House, W.C.2.

Notes and News

Vacancy for a Traction Motor Designer.—Applications are invited for an experienced traction motor designer for work in connection with diesel-electric traction. See Official Notices on page 167.

Vacancy for an Engineer.—An engineer with railway experience is required by a firm manufacturing railway rolling stock auxiliary equipment, situated 30 miles north of London. See Official Notices on page 167.

Southern Region Steamer Services.—The Cross-Channel and Isle of Wight steamers operated by the Southern Region of British Railways, during the period midnight, Thursday, July 26, to midnight, Sunday, July 29, carried 170,000 passengers.

Accident at Dalguise Station.—At 4.50 p.m. on August 1, a mishap involving the 4.10 p.m. local passenger train from Perth to Blair Atholl and a railway service train, occurred at Dalguise Station, on the Perth-Pitlochry line, Scottish Region; as a result four passengers on the local passenger train were injured. Two passengers and three members of the railway staff were afterwards admitted to Perth Royal Infirmary.

General Electric Co. Ltd.—For the twelve months ended March 31 the group profit of the General Electric Co. Ltd. was £5,651,418 as compared with £4,471,692 during the previous year. The consolidated net profit attributable to the holding company was £1,978,039 after payment of taxes of £3,149,743. The ordinary dividend is 10 per cent., the same as last year, with a cash bonus of 12½ per cent. against 7½ per cent.

Edgar Allen & Co. Ltd.—Trading profits of Edgar Allen & Co. Ltd. for the twelve months to March 31 totalled £547,549 as compared with £454,352 for the previous accounting period. Including interest, together with the dividends and profits of their subsidiaries, the latter totalling £11,103, against £20,950, the available sum is £591,436. After allowing for depreciation, etc., and with £271,600 for tax, the directors propose to place £100,000, against £28,648, to general reserve, and £60,000, against nil, to reserve for maintenance and repairs. The ordinary dividend is again 12½ per cent. and in addition a bonus of 2½ per cent. is to be paid. Balance carried forward is £95,911 against £100,454. According to the report the directors are considering the advisability of reorganising the capital structure so as to reduce the disparity between the amount of capital actually employed and the authorised and issued share capital.

Leyland Motors Limited Branch at Secunderabad.—A sales and service branch for Leyland operators has been opened at Secunderabad, India, by Automotive Manufacturers Limited, agents for Leyland Motors Limited at Bombay. In addition to providing facilities for individual operators, the branch will also serve the Road Transport Department of the Nizam's State Railway.

Road Passenger Transport Services in Grays and Tilbury District.—The London Transport Executive and the Eastern National Omnibus Co. Ltd. announce that, so that the local road passenger transport services in the Grays and Tilbury district, Essex, may be co-ordinated and improved, arrangements have been made, with the authority of the British Transport Commission for the transfer of the Eastern National local bus services and the garage at Grays to London Transport as from September 30.

Indian Rail Strike Threat.—The International Transport Workers' Federation in London has suggested to the Indian Government that there should be a negotiated settlement to avert the general railway strike called by the All-India Railwaymen's Federation from August 27. A summary has been sent to the General Secretary of the Railwaymen's Federation in Madras. It says that if no agreement is reached by negotiations the Government could avoid conflict by "wise restraint in use of powers conferred by ordinance" which prohibits strikes in all essential services. The 300,000-strong All-India Railwaymen's Federation decided to strike in order to obtain increased cost of living allowances.

District Line Train Describers.—The London Transport Executive is to fit "non-stop" train describers, of the type illustrated, on all District Line westbound platforms between Mansion House and Earls Court. The signs, which supersede

the earlier type that showed merely "Ealing Non-Stop," etc., have been installed experimentally for some months at St. James's Park. Station names are black on a yellow background.

Stranraer-Larne Mail Steamer to be Reconditioned.—The Scottish Region of British Railways announces that the turbine steamer *Princess Margaret* is to be reconditioned and converted from coal to oil burning. The work will be carried out by D. & W. Henderson & Co. Ltd. This vessel was built for the Stranraer and Larne mail service in 1931.

Klinger High-Pressure Valves.—A new design of high-pressure piston valve is being produced by Richard Klinger Limited for instrument work. This valve has an outlet $\frac{3}{16}$ in. dia. and is tested to 9,000 lb. pressure per sq. in. It is suitable for oil pressures up to 5,000 lb. per sq. in. and in the case of superheated steam for pressures up to 2,000 lb. The body is a drop forging of high-quality steel and other details are made of stainless steel.

Agency for Twin-Arc Welding Process.—The directors of the Quasi-Arc Co. Ltd. announce that arrangements are in hand with the General Electric Co. Ltd. under which the former company will be the sole concessionnaires throughout the world for the G.E.C. twin-arc metallic arc welding process. This process will be demonstrated on the Quasi-Arc stand at the Engineering, Marine & Welding Exhibition at Olympia, using Quasi-Arc electrodes.

Soap and Towels for Main-Line Trains.—British Railways announce that as supplies permit soap and towels are being provided in the toilet compartments of all main-line corridor trains. At present these are available on sleeping cars, boat trains, and selected main-line services. Liquid soap dispensers and paper towels will be standard equipment, and coaches will be fitted as they go through the shops for repair, but for the time being tablet soap and cotton or paper towels will continue to be used on some services.

Sun Parlour from York Christmas Tree.—Mr. J. E. Richardson, District Commercial Superintendent, North-Eastern Region, York, speaking at the opening of a sun parlour at the Deighton Grove Hospital provided by the 1947 Christmas Tree Appeal at York Station, when passengers contributed £1,337, said that in the 16 years since 1935 the total contributions made to York hospitals from these appeals had been £6,024. Mr. C. M. Jenkin-Jones, formerly Divisional General Manager of the North-Eastern Area of the L.N.E.R., speaking as Chairman of the Hospital Finance Committee, said that the collection did not collect itself, and that there was a large amount of independent effort which represented a labour of love by the railway staff.

Arthur Balfour & Co. Ltd.—The directors of Arthur Balfour & Co. Ltd. recommend the payment—by way of cash bonus—of 1½ per cent. more than the 16 per cent. dividend forecast when the company became public in December last.

Gloucester Railway Carriage & Wagon Co. Ltd. London Office.—On Tuesday, August 14, the London Office of the Gloucester Railway Carriage & Wagon Co. Ltd. will be reopened at Albemarle House, 1, Albemarle Street, W.1, under the management of Mr. G. E. Embleton. The telephone number of the office will be Grosvenor 8206.

Thomas De La Rue & Co. Ltd.—With a 35 per cent. final dividend recommendation the directors of Thomas De La Rue & Co. Ltd. bring the distribution to 50 per cent. for the fifth successive year. Group trading profits in the year to March 31, after administration charges and depreciation, expanded from £450,378 to £575,004. The directors report a substantial profit in the industrial divisions with plastics making a considerable contribution. They add that due to the general improvement in the trading results of the industrial side, the need for fresh capital for the company is diminishing and they have therefore postponed indefinitely consideration of the question of raising fresh capital.

Charles Roberts & Co. Ltd.—The directors of Charles Roberts & Co. Ltd. recommend a final ordinary dividend of 10 per cent., against 12½ per cent., making 20 per cent. for the year to March 31, which is the same as before. A distribution of 5 per cent., not subject to tax, from capital accretions was made in February last. The consolidated profits amounted to £327,494, against £316,457, subject to deductions of £27,029 for depreciation and £189,548 for income tax.

Heavy-Duty Diesel Tractor.—A variation of the Mighty Antar heavy-duty diesel tractor has been designed and produced for export to Australia expressly as a prime mover for a road train. The main components are similar to those of the original tractor built by Transport Equipment (Thornycroft) Limited for the Iraq Petroleum Co. Ltd., which was described and illustrated in our June 30, 1950, issue. In the preseut design the wheelbase has been reduced to 15 ft. 6 in. Other features include 20-ply tyres, twins on the rear axles, two 30-gal. fuel tanks, right-hand steering and controls, a 2-line trailer brake connection, and heavy towing hooks front and rear. A power take-off of 100 h.p. is fitted on the auxiliary gearbox providing

Heavy-duty Thornycroft tractor for a road train (*see paragraph above*)

the drive to a type 70 Darlington 50,000-lb. pull winch, complete with controls, and 350 ft. of 1-in. dia. wire rope. A Crane fifth wheel with king pin is fitted over the rear bogey. The prime mover with the existing axle ratio of 14·4 to 1 will handle a gross train-weight of 100 tons at speeds up to 30 m.p.h. under suitable conditions. With a modified axle ratio and auxiliary low gear in operation the tractor will haul a gross train weight of 150 tons for limited periods at lower speeds.

Hackbridge & Hewittic Electric Co. Ltd.—Mr. Thomas F. Lister, Chairman & Managing Director, stated at the recent annual general meeting of the Hackbridge & Hewittic Electric Co. Ltd. that, since his statement circulated with annual report was issued, the company had obtained in face of keen competition a $600,000 order from the United States for rectifier equipment. Adding this to the order recently obtained from the Southern Region of British Railways, it meant that in past two months orders for rectifier equipment over and above normal demand had been in the region of £1,000,000.

Collision at Ford Station.—On August 5 the 10.47 a.m. train from Three Bridges to Bognor Regis *via* Littlehampton was standing in the loop line at Ford Station, Southern Region, when the 11.17 a.m. from Brighton to Portsmouth Harbour ran into its rear at 11.58 a.m. The front coach of the 11.17 and rear coach of the 10.47 were telescoped and both up and down lines blocked, as well as the loop line. As a result nine persons died and 46 were injured. The Ministry of Transport inquiry was opened at the Grosvenor Hotel, Victoria, on August 9, by Brigadier C. A. Langley, an Inspecting Officer of Railways, Ministry of Transport.

Glasgow Fair Holiday Train Services.—The 1951 holiday exodus from Glasgow started on Friday, July 13, and approximately 150,000 holidaymakers passed through the city stations in the 24-hr. period ended four o'clock on Saturday, July 14. Of the 151 special trains run on July 13 and 14, 132 left from the four main terminal stations. To minimise congestion at the peak periods of the holiday movement 19 special trains were started from district stations in Glasgow and these specials served a wide range of destinations. In addition, on July 14 and 15, 13 special trains ran to various stations for "Z" reservists, and Territorial Army camps. Approximately 35,000 seat reservations were made by Glasgow Fair travellers; 1,500 sleeping berths were let; and during the week leading up to the beginning of the holidays a series of Luggage Only trains bound for all parts of the country left from Glasgow and district stations.

Forthcoming Events

August 18 (*Sat.*).—Permanent Way Institution, London Section, visit to Barclay Perkins & Co. Ltd. Southwark Brewery. Members of the party will assemble at London Bridge Station at 1.30 p.m.

August 21 (*Tue.*).—Permanent Way Institution, Leeds Section, evening visit to York Station to inspect the new signalling installation.

August 22 (*Wed.*) to September 1 (*Sat.*).—The Model Engineer Exhibition, at the New Royal Horticultural Hall, Westminster, S.W.1.

Railway Stock Market

After the big fall in industrial values which resulted from the dividend limitation plan, markets steadied, and they have made a partial rally at the time of writing. Although selling has not been exceptionally heavy, values were adjusted to a yield basis justified by the dividends that will be permitted if the plan becomes law. Now buyers are tending to reappear because it is pointed out that, even in the Gaitskell dividend basis, many shares at current prices give not unattractive yields. One factor helping markets is one which it is thought may do much to keep up share values, namely, the tendency for companies which reduce their dividends to levels permitted by the plan also to place profits to special dividend reserves which it is planned to distribute to shareholders when the "freeze" is over. The better tendency in industrial shares has benefited markets generally. British Funds remained firm.

Because they are unaffected by dividend limitation, overseas and freight securities of all kinds have tended to come in for more attention, including foreign rails. Antofagasta have been particularly strong again, with a sharp advance in the preference stock to 73, while the ordinary stock moved up sharply to 13. The market hopes that, sooner or later, there will be a scheme for funding the outstanding years of preference dividend arrears, which would clear the way for resumption of ordinary dividends. Alternatively, it is pointed out that if ever it were decided to take over the railway, the preference stock would be worth par, plus outstanding dividend arrears. On the other hand a scheme for funding preference dividend arrears would be difficult to devise unless ordinary stock were given in lieu of the preference arrears; and it is unlikely that preference stockholders would accept ordinary stock unless there were a good prospect of regular payments on the latter. Moreover, the directors have never indicated that they have in mind any scheme for funding preference dividend arrears. But at all events the view that Antofagasta preference stock seems the most attractive investment-cum-speculation remaining in the foreign railway market now appears to be widely held.

Leopoldina stocks were firm with the ordinary at 10½, the preference 26¼, the 4 per cent. debentures 95¼, the 6½ per cent. debentures 142, and Leopoldina Terminal 5 per cent. debentures 93½. San Paulo 10s. units were 14s. 4½d. and Brazil Rail bonds rose to £7. Manila debentures have also been firmer with the "A" at 77; the preference shares were 8s. 9d. La Guaira ordinary stock remained firm at 89½ and Bolivar "C" debentures at 70. Nitrate Rails showed firmness at 22s. 6d. and Taltal shares were 17s. 6d. United of Havana stocks have strengthened up in the hope of reasonable nationalisation terms; the 1906 debentures were 19¼. White Pass Yukon 5 per cent. debentures remained under the influence of the proposed scheme, and were dealt in up to 207½, and the income debentures at 92. Canadian Pacifics were active with dollar stocks, sentiment in regard to which was helped by the higher International Nickel quarterly dividend. Canadian Pacifics were close on 59; while elsewhere the yield of nearly 5½ per cent. on the 4 per cent. non-cumulative preference stock brought in buyers around the current level of 76. The 4 per cent. debentures showed firmness at 94. In other directions Emu Bay debentures marked 7½. Dorada Rails were 67 and Guayaquil & Quito first bonds have been active up to 30.

Engineering and kindred shares reflected the better tendency which has developed in stock markets. Vickers firmed up to 47s. 9d., and Guest Keen to 59s. 4½d., while T. W. Ward were 70s. Thornycroft were 50s. "ex" the 100 per cent. share bonus. At Glasgow Hurst Nelson were 61s. 6d. Birmingham Carriage have changed hands around 38s. 3d. and Charles Roberts fell to 98s. 9d. on the unchanged dividend, though no increase was of course expected. Wagon Repairs 5s. shares were 14s. 9d. Beyer Peacock have been dealt in around 31s. 10½d., North British Locomotive were 18s. 6d., Gloucester Wagon 16s. 3d., and Vulcan Foundry 28s. 9d.

NEW ADDRESS OF BOARD OF TRADE H.Q.—The headquarters of the Board of Trade is being transferred to Horse Guards Avenue, Whitchall, London, S.W.1.; telephone, Trafalgar 8855. Many of the branches of the Industries & Manufactures Department, Division 2, have already moved to the new offices and the principal officers of the Secretariat are expected to move on August 13.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1949/50	No. of week	Aggregate traffics to date: Total 1950/51	Aggregate traffics to date: Increase or decrease
South & Cen. America	Antofagasta ...	811	27.7.51	£ 143,960	+ £ 68,450	30	£ 3,521,360	+ £ 1,702,686
	Costa Rica ...	281	May, 1951	c566,653	− c467,774	47	c10,178,533	+ c694,685
	Dorada	70	June, 1951	36,543	+ 12,762	26	213,760	− 17,412
	Inter. Ctl. Amer. ...	794	June, 1951	$1,032,974	− $83,457	26	$6,931,651	− $99,579
	Paraguay Cent. ...	274	27.7.51	₴340,063	+ ₴165,968	4	₴1,211,710	+ ₴440,618
	Peru Corp. ...	1,050	June, 1951	S8,533,000	+ S1,650,000	52	S92,754,000	+ S21,536,942
	" (Bolivian Section)	66	June, 1951	Bs. 15,967,000	+ Bs.11900000	52	Bs. 160,349,000	+ Bs.49,599,336
	Salvador	100	May, 1951	c138,000	+ c31,000	48	c1,867,000	+ c136,000
	Taltal	154	June, 1951	$1,675,315	− $259,456	52	$20,544,647	+ $2,959,409
Canada	Canadian National†	23,473	May, 1951	17,653,000	+ 1,809,000	22	82,112,000	+ 12,717,000
	Canadian Pacific† ...	17,037	June, 1951	12,146,000	+ 1,372,000	26	68,992,000	+ 9,890,000
Various	Barsi Light* ...	167	June, 1951	30,435	+ 1,447	13	113,112	+ 23,872
	Egyptian Delta ...	607	10.4.51	17,513	− 267	4	17,513	− 267
	Gold Coast ...	536	May, 1951	262,770	+ 5,883	8	556,234	+ 70,167
	Mid. of W. Australia	277	May, 1951	55,547	+ 19,139	48	454,081	+ 108,823
	South Africa ...	13,347	30.6.51	1,869,453	+ 207,421	13	24,463,009	+ 3,942,421
	Victoria	4,744	Mar., 1951	1,811,748	− 163,026	39	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1